

**City of Cambridge  
Articles of Agreement**

**Commodity: Digital Equity Consultant Services  
File Number: 8445**

This agreement is made and entered into this **05/17/2019** by and between the **City of Cambridge** ("the CITY"), a municipal corporation organized and existing under the laws of the **Commonwealth of Massachusetts**, and **Columbia Telecommunications Corporation dba CTC Technology & Energy**, a corporation duly organized and existing under the laws of the **State of Maryland** ("the Contractor").

**Address: 10613 Concord Street, Kensington, MD 20895**  
**Email address: [info@ctcnet.us](mailto:info@ctcnet.us)**  
**Telephone: 301-933-1488**

**Article I. Definition.** "This Contract" as used herein shall mean these Articles of Agreement and "the bid documents," which include, but are not limited to, the instructions to bidders, the Contractor's bid or proposal, the specifications, the general conditions, the requirements, the applicable addenda, and all documents and forms submitted with the Contractor's bid or proposal that were accepted by the City.

**Article II. Duration.** The Contractor shall commence the performance of this contract for the period beginning on **05/17/2019** and ending on **05/16/2020**. **The continuation of this contract into any fiscal year is dependent upon the appropriation and availability of funds.**

**Article III. Terms.** The Contractor agrees to provide the services all in accordance with the bid documents of **03/28/2019**.

**Contract Value: \$189,850.00**

**Article IV. Payment.** The City agrees to pay to Contractor the sum set forth in the Contractor's bid or proposal. **Contractor shall invoice, The City Managers Office, 795 Massachusetts Avenue, Cambridge, MA 02139, to which it provided the service, not the Purchasing Department.**

**Article V. Termination.** The following shall constitute events of default under this Contract requiring immediate termination: a) any material misrepresentation made by the Contractor, b) any failure by the Contractor to perform any of its obligations under this Contract including, but not limited to, the following: (i) failure to commence performance of this Contract at the time specified in this Contract due to a reason or circumstance within the Contractor's reasonable control, (ii) failure to perform this Contract with sufficient personnel and equipment or with sufficient material to ensure the completion of this Contract within the specified time due to a reason or circumstance within the Contractor's reasonable control, (iii) failure to perform this Contract in a manner reasonably satisfactory to the City, (iv) failure to promptly re-perform within reasonable time the services that were rejected by the City as erroneous or unsatisfactory, (v) discontinuance of the services for reasons not beyond the Contractor's reasonable control, (vi) failure to comply with a material term of this Contract, including, but not limited to, the provision of insurance and nondiscrimination, and (vii) any other acts specifically and expressly stated in this Contract as constituting a basis for termination of this Contract.

Except as otherwise provided in the Articles of Agreement, the City may terminate the contract upon seven days notice.

**Article VI. Damages.** From any sums due to the Contractor for services, the City may keep for its own the whole or any part of the amount for expenses, losses and damages as directed by the Purchasing Agent, incurred by the City as a consequence of procuring services as a result of any failure, omission or mistake of the Contractor in providing services as provided in this Contract.

**Article VII. Conflict.** In the event there is a conflict between these Articles and the bid documents, the bid documents shall supersede these articles.

**Article VIII. Governing laws and ordinances.** This Contract is made subject to all the laws of the Commonwealth and the Ordinances of the City and if any such clause thereof does not conform to such laws or ordinances, such clause shall be void (the remainder of the Contract shall not be affected) and the laws or ordinances shall be operative in lieu thereof.

**Article IX. Performance Security.** Upon execution of this Contract by the Contractor, the Contractor shall furnish to the City security for the faithful performance of this Contract in the amount of 0% of the value of the bid in the form of a performance bond issued by a surety satisfactory to the city or in the form of a certified check.

**Article X. Equal Opportunity.** the Contractor in the performance of all work under this contract will not discriminate on the grounds of race, color, sex, age, religious creed, disability, national origin or ancestry, sexual orientation, marital status, family status, military status, or source of income in the employment practices or in the selection or retention of subcontractors, and in the procurement of materials and rental of equipment. The city may cancel, terminate or suspend the contract in whole or in part for any violation of this article.

**Article XI. Assignability.** the Contractor shall not assign, sell, subcontract or transfer any interest in this contract without prior written consent of the city.

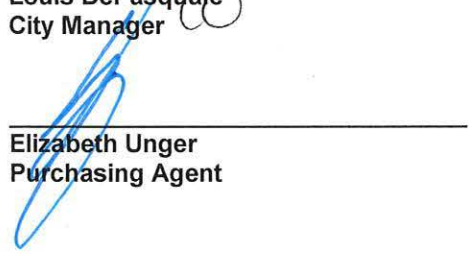
In witness whereof the parties have hereto and to three other identical instruments set their hands the day and year first above written.

The City:

  
Louis DePasquale  
City Manager

The Contractor: CTC Technology & Energy

  
Signature and Title

  
Elizabeth Unger  
Purchasing Agent

Approved as to Form:

  
Nancy E. Glowa  
City Solicitor

**Certificate of Authority**

This document hereby certifies that, Joanne S. Hovis, the President  
Columbia Telecommunications Corporation  
of this corporation (dba CTC Technology & Energy), is hereby authorized and empowered to make,  
enter into, sign, seal, and deliver on behalf of the corporation, a contract for

Consultant Services for Cable Television License Renewal with the City of Cambridge.

This authority is given by, Joanne S. Hovis, on 20 19.  
(Print Name)

Approved by; Joanne S. Hovis

Signature: Joanne S. Hovis

Title: President

Attest: Samantha Puff

Affix Corporate Seal Here

## **WAGE THEFT PREVENTION CERTIFICATION**

In Executive Order 2016-1, the City of Cambridge established requirements for City contracts in an effort to prevent wage theft. Prospective vendors must provide the following certifications or disclosures with their bids/proposals. Failure to provide the following shall result in rejection of the bid/proposal.

### **Instructions for this form:**

A prospective vendor must check box 1 or box 2, as applicable, as well as boxes 3-5, and must sign this Form, certifying compliance with the requirements set out in this Form. This Form must be included with the bid or proposal, and for multi-year contracts must be completed annually on the contract anniversary and filed with the Purchasing Agent.

The undersigned certifies under the pains and penalties of perjury that the vendor is in compliance with the provisions of Executive Order 2016-1 as currently in effect.

### **All vendors must certify that [check either box 1 or box 2, as applicable]:**

1. ☒ Neither this firm nor any prospective subcontractor has been subject to a federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal submission.

**OR**

2. ☐ This firm, or a prospective subcontractor of this firm, has been subject to a federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal submission and such documentation is included in the bid/proposal submission.

### **In addition, all vendors must certify each of the following:**

3. ☒ Any federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* imposed on this firm or on any prospective subcontractor while any bid/proposal to the City is pending and, if awarded a contract, during the term of the contract, will be reported to the Purchasing Agent or other City department within five (5) days of receiving notice.



4. ☒ Vendors awarded a contract that have disclosed a federal or state criminal or civil judgment, administrative citation, final administrative determination, or order resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal, while the bid/proposal was pending, or during the term of the contract shall, upon request, furnish their monthly certified payrolls for their City contract to the Purchasing Agent for all employees working on such contract and are required to obtain a wage bond or other suitable insurance in an amount equal to the aggregate of one year's gross wages for all employees. Vendors subject to a state or federal debarment for violation of the above laws or prohibited from contracting with the Commonwealth are prohibited from contracting with the City, and upon a finding or order of debarment or prohibition, the City may terminate the contract.

5. ☒ Notice provided by the City, informing employees of the protections of Executive Order 2016-1 and applicable local, state, and federal law will be posted by this firm in conspicuous places.

Attested hereto under the pains and penalties of perjury:

Joanne S. Hovis  
(Typed or printed name of person signing  
quotation, bid or proposal)

  
Signature

Columbia Telecommunications Corporation (dba CTC Technology & Energy)  
(Name of Business)

Pursuant to Executive Order 2016-1, vendors who have been awarded a contract with the City of Cambridge must post the Massachusetts Wage and Hour Laws notice informing employees of the protections of G.L. c. 149, G.L. c. 151, and 21 U.S.C. 201 *et seq.* in conspicuous places. This notice can be found at <http://www.mass.gov/ago/docs/workplace/wage/wagehourposter.pdf>

## CORI COMPLIANCE FORM

Persons and businesses supplying goods and/or services to the City of Cambridge ("Vendors"), who are required by law to perform CORI checks, are further required by Section 2.112.060 of the Cambridge Municipal Code to employ fair policies, practices and standards relating to the screening and identification of persons with criminal backgrounds through the CORI system. Such Vendors, when entering into contracts with the City of Cambridge, must affirm that their policies, practices and standards regarding CORI information are consistent with the policies, practices and standards employed by the City of Cambridge as set forth in the City of Cambridge CORI Policy ("CORI Policy") attached hereto.

### CERTIFICATION

The undersigned certifies under penalties of perjury that the Vendor employs CORI related policies, practices and standards that are consistent with the provisions of the attached CORI Policy. **All Vendors must check one of the three lines below.**

1. \_\_\_\_\_ CORI checks are not performed on any Applicants.
2. ☒ CORI checks are performed on some or all Applicants. The Vendor, by affixing a signature below, affirms under penalties of perjury that its CORI policies, practices and standards are consistent with the policies, practices and standards set forth in the attached CORI Policy.
3. \_\_\_\_\_ CORI checks are performed on some or all Applicants. The Vendor's CORI policies, practices and standards are not consistent with the attached CORI Policy. Please explain on a separate sheet of paper.

\_\_\_\_\_  
Joanne S. Hovis  
(Typed or printed name of person  
signing quotation, bid or Proposal)

\_\_\_\_\_  
*Joanne S. Hovis*  
Signature

\_\_\_\_\_  
Columbia Telecommunications Corporation (dba CTC Technology & Energy)  
(Name of Business)

#### **NOTE:**

The City Manager, in his sole discretion may grant a waiver to any Vendor on a contract by contract basis.

#### **Instructions for Completing CORI Compliance Form:**

A Vendor should not check Line 1 unless it performs NO CORI checks on ANY applicant. A Vendor who checks Line 2 certifies that the Vendor's CORI policy conforms to the policies, practices and standards set forth in the City's CORI Policy. A Vendor with a CORI policy that does NOT conform to the City's CORI Policy must check Line 3 and explain the reasons for its nonconformance in writing. Vendors, who check Line 3, will not be permitted to enter into contracts with the City, absent a waiver by the City Manager.

**This form must be submitted with your proposal**



**Americans with Disabilities Act (42 U.S.C. 12131)**  
**Section 504 of the Rehabilitation Act of 1973**  
**Tax Compliance/Anti-Collusion Statement**  
**Debarment Statement**

The Americans with Disabilities Act (the "Act") applies to all employers of fifteen or more employees. All vendors that are subject to the Act must comply with its provisions. In further compliance with the Act, all Contractors who enter into contracts with the City are prohibited from discrimination against the City's employees, regardless of the size of the Contractor.

The Act protects against discrimination on the basis of "disability", which is defined as a physical or mental impairment that substantially limits at least one "major life activity"; discrimination against a person having a history or record of such impairment; and discrimination against an individual regarded - even if inaccurately - as having such an impairment. The Act also expressly prohibits discrimination that is based on an individual's relationship or association with a disabled person.

The Contractor shall not discriminate against any qualified employee or job applicant with a disability and will make the activities, programs and services covered by any contract awarded through this procurement readily accessible to and usable by individuals with disabilities. To be qualified for a job, or to avail oneself of the Contractor's services, the individual with the disability must meet the essential eligibility requirements for receipt of the Contractor's services or participation in the Contractor's programs or activities with or without: 1) reasonable modifications to the Contractor's rules, policies and practices; 2) removal of architectural, communication, or transportation barriers; or, 3) provisions of auxiliary aids and services.

By submitting its contract, the Contractor certifies to the City of Cambridge that it understands and will comply with all applicable provisions of the Act, including compliance with applicable provisions of Section 504 of the Rehabilitation Act of 1973, if the Contractor is receiving federal funds.

The undersigned certifies under penalties of perjury that this contract has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals

As required by M.G.L. c. 62C, §49A, the undersigned certifies under the penalties of perjury that the Contractor has complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

The undersigned certifies that it is not currently subject to any State or Federal debarment order.

Date: 05/21/2019

Joanne S. Hovis

(Print Name of person signing bid)

Joanne S. Hovis, President  
(Signature & Title)

**ctc technology & energy**

engineering & business consulting

ORIGINAL

**Non-Price Proposal  
for  
Digital Equity Consultant Services**

**Prepared for the City of Cambridge  
March 2019**

# ctc technology & energy

engineering & business consulting

March 27, 2019

Ms. Elizabeth Unger  
Purchasing Agent  
City Hall, Room 303  
795 Massachusetts Ave.  
Cambridge, MA 02139

*Subject:* Non-price proposal to provide digital equity consultant services

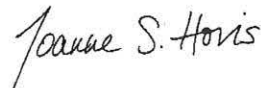
Dear Ms. Unger:

CTC Technology & Energy is pleased to present the attached proposal to support the City of Cambridge with a comprehensive study and analysis of the broadband gaps affecting the City's low-income and otherwise disadvantaged populations.

CTC developed the City's methodology for this study in a previous engagement. Our goal then—as a reflection of the City's commitment to digital equity—was to envision a first-of-its kind approach that encompassed comprehensive research, multi-pronged data collection, and rigorous analysis. As our proposal illustrates, we believe we are uniquely qualified to execute this project.

Please do not hesitate to contact me if I can provide any additional information about our qualifications. We look forward to the opportunity to support the City on this initiative.

Sincerely,



Joanne S. Hovis  
President, CTC Technology & Energy

**Columbia Telecommunications Corporation**

10613 Concord Street • Kensington, MD 20895 • Tel: 301-933-1488 • Fax: 301-933-3340 • [www.ctcnet.us](http://www.ctcnet.us)



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## 1 About CTC

CTC is a 35-year-old, established business headquartered in Kensington, Maryland. We are a small, woman-owned business enterprise with a national and international profile. **We are proud of our previous work with the City of Cambridge—including, last year, our development of the first-of-its-kind broadband equity research methodology** that is at the heart of the City's RFP.

In designing the City's methodology, we intended to enable the City to rigorously research the broadband ecosystem in Cambridge on both the supply and demand sides, and across all demographics. The methodology will enable the City to understand what broadband equity challenges exist—and to develop targeted solutions to attempt to meet those challenges.

**We have conducted cutting-edge, broadband-related market research and community needs analyses for more than two decades.** We have recently assisted such communities as San Francisco, Seattle, and many others to determine their unmet communications needs.

**We deliver custom work, with clear and transparent methodologies and models.** We have decades of experience providing independent financial, strategic, and technical, guidance for public sector and non-profit communications networks, including those of state and local governments, non-profit consortia, universities, and municipal utilities.

**We have conducted dozens of assessments of broadband infrastructure and services for public sector clients nationwide over the past 20 years,** including the cities of Seattle and San Francisco; the District of Columbia (Washington, D.C.); the states of New Mexico, Nebraska, Connecticut, and Kansas; and the U.S. Small Business Administration. We understand how to qualitatively and quantitatively evaluate underserved and unserved communities.

**Our principals and most senior team will work on this effort** and we commit their time throughout the engagement with no risk that we will assign anyone less than our "A team." Guaranteed staffing—in this case, with senior staff who are deeply familiar with Cambridge and the Boston metro area—is a hallmark of our small but high-profile and highly specialized firm.



## 2 CTC's Experience Exceeds the City's Quality Requirements

CTC unconditionally meets the City's requirements as identified in the "Quality Requirements" form (see Attachment A).

### 2.1 Independence

As a matter of philosophy, CTC is a public interest-focused consultancy. We work primarily for public, cooperative, and other non-profit entities and have no financial relationships or business ties with wireless carriers, internet service providers (ISP), equipment vendors, construction contractors, or systems integrators. Because of our policy decision to avoid conflicts of interest, we will be your independent, objective adviser.

### 2.2 Experience in Infrastructure Engineering, Market Assessment, Business Planning, Strategic Planning, and Surveying

**Infrastructure Engineering:** We have designed, engineered, and overseen the construction of thousands of miles of outside plant (OSP) fiber, including for municipal fiber-to-the-premises (FTTP) initiatives and middle-mile networks.

Our OSP engineers currently are conducting a citywide OSP audit for the City of Madison. We are engaged in fiber engineering and construction oversight project for Anne Arundel County, Maryland; Arlington County, Virginia; and the City of Westminster, Maryland. We also created the outside plant (OSP) architecture for the New Zealand national fiber-to-the-home buildout.

**Market Assessment:** We have been analyzing broadband pricing and how the competitive market works for 20 years. CTC's analysts perform market assessments as a key element of our broadband feasibility and master plan studies. In just the past few years, we have evaluated the residential, small business, and enterprise broadband markets on behalf of the cities of Bloomington, Ind.; Boston; Boulder, Colo.; Madison, Wis.; Seattle; and other cities and towns nationwide.

**Business and Strategic Planning:** We have developed broadband business and strategic plans studies for many of the leading cities in North America, including Seattle, Portland, Boulder, and Palo Alto. We have advised the District of Columbia (Washington, D.C.), Boston, Atlanta, Seattle, and Vancouver regarding working collaboratively with the private sector to realize broadband goals.

We helped the City of Boston with business and strategic planning around its needs for an expanded fiber network. As the result of our engagement, all schools, public safety agencies, and other operations throughout the City will get the connections they need—and the City will have long-term control of scalability for potential future smart city applications and public Wi-Fi. For





more details, see our website: <http://www.ctcnet.us/blog/how-smart-strategy-and-rigorous-analysis-enable-boston-to-save-while-effectuating-city-and-public-broadband-needs/>.

As the City of Seattle's longtime broadband consultant, CTC has delivered business, technical, and strategic guidance over the course of many significant projects. We completed a major fiber-to-the-premises (FTTP) feasibility study that included residential and business market research, financial projections for multiple buildout approaches, and a risk assessment. We have also explored options for reaching underserved and unserved residents with broadband (see Section 3.2 below).

We played a key role in helping the City of Tacoma, Wash., negotiate a public-private partnership for operation of the city's Click! network. Following 18 months of strategic and business planning (as well as community engagement), the City Council currently is considering term sheets for a partnership that will achieve critical community goals and values—including net neutrality, low-income affordability, privacy, and competition. For more details, see our website: <http://www.ctcnet.us/blog/tacoma-wash-plans-municipal-broadband-p3-that-includes-private-commitments-to-net-neutrality-equity-and-privacy/>.

**Surveying and Survey Analysis:** We have conducted dozens of broadband-related, statistically valid mail and phone surveys for CTC's public sector clients nationwide over the past 20 years—including the cities of Seattle and San Francisco; the District of Columbia (Washington, D.C.); the states of New Mexico and Kansas; and the U.S. Small Business Administration.

## 2.3 Experience Working in Boston Metro Area / Local Project Manager

### Metro-Area Experience

The **City of Cambridge** recently engaged CTC to provide strategic and technical guidance as it navigates the cable franchise renewal process with Comcast. We are approaching that work with a broad view of the importance of the City's franchise award relationship with Comcast; we will be helping the City to think strategically about what the next decade of use of the cable infrastructure could mean for the citizens of Cambridge, including those of limited resources, and how this infrastructure can be better utilized to serve citizens' needs. Specifically, we recognize that the renewal process can be a singularly important tool to potentially advance the City's broadband equity agenda.

CTC has been a broadband consultant to the **City of Boston** for many years. Most recently, CTC engineers and analysts evaluated and provided recommendations related to the City's range of

strategic options for deploying fiber optics to connect its public schools and government facilities.<sup>1</sup>

In addition to our work with the City of Boston, CTC currently is consulting to a number of municipal light plants in the Boston metro area, including in the cities and towns of **Braintree, Norwood, Peabody, and Shrewsbury.**

### Local Project Manager

Our project manager, Dave Talbot, leads our Massachusetts office. Dave is an experienced researcher and writer who conducts a range of analytical, research, and needs assessment tasks. Prior to coming to CTC he was a fellow at the Berkman Klein Center for Internet & Society at Harvard University, where he researched and wrote reports on municipal fiber and related topics. He previously worked as a senior editor and chief correspondent at *MIT Technology Review*, where he frequently covered issues related to internet and communications technologies and policies.

## 2.4 Working with Towns or Cities That Are Home to Major Universities

We understand—and have addressed—the unique broadband-related issues that arise in cities and towns that count a major university as one of its key local stakeholders. For example, we have designed surveys to include or exclude student populations; explored the impact of transient student populations on broadband demand in off-campus housing; and collaborated with representatives of cities and universities to identify opportunities for fiber partnerships. In addition, we are intimately familiar with the ways that large student, staff, and faculty populations impact the life of a city and the larger broadband trends in that city—as well as how many in the community do not necessarily benefit from the presence of educational institutions.

In just the past few years, CTC has performed broadband needs analyses or other broadband-related studies for the following local government clients that are home to major universities:

- Atlanta – our work was a collaboration between the city government and Georgia Tech
- Baton Rouge, La. – Louisiana State University was a key stakeholder in our work
- Bloomington, Ind. – Indiana University's IT department was a key stakeholder
- Boston
- Boulder – the University of Colorado's telecommunications law program was a key stakeholder
- Lawrence, Kan. – the University of Kansas' IT department was a key stakeholder

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<sup>1</sup> For more details, see our website: <http://www.ctcnet.us/blog/how-smart-strategy-and-rigorous-analysis-enable-boston-to-save-while-effectuating-city-and-public-broadband-needs/>



- Madison, Wis. (University of Wisconsin)
- Newark, Del. (University of Delaware)
- New Haven, Conn. (Yale University)
- Palo Alto, Calif. (Stanford University)
- Seattle (University of Washington)
- Urbana-Champaign, Ill. – our work was for a collaboration of the two cities with the University of Illinois

## **2.5 Working with Community Advisory Boards That Include Representatives of Local Universities and Nonprofits**

Among our recent projects that have included collaboration with community advisory boards—and specifically advisory boards that include representatives of local universities and nonprofits—are the following:

- Bloomington, Ind.
- Lawrence, Kan.
- Madison, Wis.
- Urbana-Champaign, Ill.

## **2.6 Project Team Experience**

As our team resumes illustrate (see Attachment B), CTC's project team members have in the aggregate well more than 10 years of experience performing the types of services described in the City's RFP and our statement of work.

Notably:

- Tom Asp and Doug Carlson have worked together on broadband surveys since the 1990s.
- Joanne Hovis and Andrew Afflerbach have conducted broadband needs assessments, market analyses, stakeholder discussion groups, and survey and data analysis for more than 20 years.
- Marc Schulhof has developed survey instruments and analyzed survey results for CTC clients for 10 years.





### 3 CTC's Staffing Plan Exceeds the City's Comparative Evaluation Criteria

Our proposal is "highly advantageous" based on the City's comparative criteria.

We present here our "highly advantageous" team, which has in aggregate *more than 15 years* of experience performing similar services and *has previously worked together on similar projects*. Brief bios of each team are below and resumes for each team member are included as Attachment B.

#### 3.1 Staffing Plan

##### 3.1.1 Team Overview

*Team leader:*

Joanne Hovis, President

*Day-to-day project manager:*

Dave Talbot, Senior Analyst (head of CTC's Massachusetts office)

*Technical consultant:*

Andrew Afflerbach, Ph.D., P.E., Chief Technology Officer

*Survey analysts:*

Joanne Hovis, President

Tom Asp, Principal Engineer and Analyst

Jacob Levin, Senior Analyst

Doug Carlson, Principal Consultant

Traci Janikowski, Research Director

*Technical writer:*

Marc Schulhof, Senior Analyst

##### 3.1.2 Team Bios

**Joanne Hovis, CTC's President and the Team Lead for this engagement**, will lead CTC's efforts throughout the engagement and will personally conduct much of the strategic planning and analysis. An attorney who has provided network business model analysis and recommendations for some of the largest public broadband strategies in the country, she is a recognized authority



on local broadband market forces and their impact on the digital divide, as well as innovative approaches strategies for collaboration and partnership among the public and private sectors.

Joanne has extensive experience conducting market assessments and developing business case and business model scenarios for public sector broadband initiatives. She leads the CTC team that advises the states of Connecticut, New Mexico, Kentucky, Massachusetts, and Kansas, the cities of San Francisco, Seattle, and Washington, D.C., and the statewide broadband networks in Colorado, Maryland, and Pennsylvania.

Joanne is an experienced and polished communicator who has presented project reports, facilitated work sessions, managed stakeholder outreach efforts, and provided briefings for technical and non-technical audiences—including state legislatures, city and county councils, mayors of major American cities, and state and federal agencies and commissions.

Joanne has testified before Congress on public sector networking strategies and on infrastructure solutions for closing the digital divide.<sup>2</sup> She has been invited as a facilitator and presenter at a White House event on broadband. She has appeared at FCC events as an invited guest to speak about broadband and communications technologies for public sector users.

**Andrew Afflerbach, Ph.D., P.E., CTC Chief Technology Officer**, will take an active role in the interviews, discussions, and review of technical issues for this project. He specializes in system-level planning, design, and implementation of wide-area and local-area telecommunications networks for government clients nationwide. Based on his extensive experience with high-capacity networks, Andrew brings a clear understanding of the capabilities and limitations of broadband services to bear on the analysis of candidate architectures, vendor proposals, network needs assessments, and market research.

**Tom Asp, Principal Engineer and Analyst**, has more than 25 years of nationwide experience as an engineer and analyst in communications and public power systems. His experience includes telecommunication system design, evaluation of network feasibility, market assessment, and surveying. He has developed financial statements and prepared quantitative business plan analyses for municipal and utility clients nationwide. He also has extensive experience presenting to local and state government officials, conducting needs assessment interviews, facilitating stakeholder sessions, and overseeing the design and implementation of statistically valid mail surveys.

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<sup>2</sup> <http://www.ctcnet.us/wp-content/uploads/2019/02/HHRG-115-IF16-Bio-HovisJ-20180130-U5002-1.pdf>





**Jacob Levin, Senior Analyst**, has researched and analyzed issues related to broadband access and affordability, and other issues related to the digital divide, for clients ranging from the California State Library to the State of Connecticut.

**Dave Talbot, Senior Analyst**, will manage the project (in coordination with Joanne Hovis) from our Boston-area office. Dave joined CTC from the Berkman Klein Center for Internet & Society at Harvard University, where as a fellow researching community networks he convened local leaders and wrote case studies about municipal fiber business models, paybacks, and pricing. Previously, as senior writer at *MIT Technology Review*, Dave wrote “The Unacceptable Persistence of the Digital Divide,” profiling efforts to end the digital divide in Cleveland through a variety of emerging technologies and programs.

Dave currently is serving as CTC’s project manager for an I-Net replacement feasibility study for the Town of Milton and as CTC’s local point of contact for fiber strategic planning for Norwich Public Utilities and Hingham Municipal Lighting Plant. He is also supporting other CTC clients around the country on policy studies and other reports.

**Marc Schulhof, CTC Senior Analyst and Technical Writer**, will support the writing of all project deliverables. Marc has 25 years of experience in technical writing, financial journalism, and corporate communications. Marc previously was the worldwide editor-in-chief of CIO program websites at IBM, a global editor at PricewaterhouseCoopers Consulting, and an associate editor at Kiplinger’s Personal Finance.

**Doug Carlson, Principal Analyst**, will assist in conducting the market research surveys. He has a strong background in market and policy analysis including market evaluations, regulatory policy analysis, and strategic planning. He has directed and assisted with numerous market research projects—including cable franchise renewal and broadband feasibility market research.

**Traci Janikowski, Research Director**, will assist in conducting the market research surveys. She is a trained professional in survey research methodology and analysis, and she is experienced in all phases of the research process. She has assisted clients with assessing attitudes, opinions, and behavior, including brand image and positioning, satisfaction and loyalty, service quality, community needs, employee and member engagement, and customer segmentation studies.

### 3.2 Experience Working Together on Similar Project

The CTC team researched and developed a comprehensive strategic plan for the City of Seattle to deploy Wi-Fi and other wireless technologies as a tool for addressing Seattle’s digital equity and digital inclusion needs (e.g., to extend wireless broadband service to low-income members of the community).



Our final report is available on our website (<http://www.ctcnet.us/publications/city-of-seattle-plan-for-facilitating-equitable-access-to-wireless-broadband-services/>).

The strategic plan balanced the city's two key project goals: The need to fill broadband gaps in neighborhoods where those gaps exist (either because of availability and affordability), and the need to develop a sustainable business model (as a reflection of the financial reality of paying for such an initiative).

Our recommendations focused on balancing Seattle's digital equity goals and the need to minimize the city's risks over time. To that end, the business plan focused on sustainability. While changes in the broadband market and wireless technologies made Wi-Fi more feasible as a means of addressing digital equity issues, the economics of Wi-Fi deployment and operations still required a business plan with realistic assumptions around costs and funding.

Our collaboration in Seattle is just one example of the analytical team's experience working together on a similar project. In an earlier engagement, working with the City and County of San Francisco, we assessed issues related to broadband adoption among low-income residents. We also note that Tom Asp and Doug Carlson have worked together on broadband surveys since the 1990s.



## 4 References

We invite the City to contact the following references about the quality of our work:

### **City of Boston**

Mike Lynch, Director, Cable, Video & OTC/M.I.S.  
Boston Office of Cable Communications  
43 Hawkins Street, Boston, MA 02114  
(617) 635-3112, [Mike.Lynch@cityofboston.gov](mailto:Mike.Lynch@cityofboston.gov)

### **City and County of San Francisco**

Brian Roberts  
Senior Policy Analyst  
Dept of Telecommunications & Information Services  
(415) 581-4061, [brian.roberts@sfgov.org](mailto:brian.roberts@sfgov.org)

### **City of Seattle**

Jim Loter  
Director of Digital Engagement  
Department of Information Technology  
(206) 684-8328, [Jim.Loter@seattle.gov](mailto:Jim.Loter@seattle.gov)



## 5 Statement of Work

We concur with the City's methodology and project timeline as outlined in the RFP. We propose to implement this methodology to collect data that holds the potential to illuminate to what degree residents of Cambridge are affected by a lack of access to affordable broadband service, lack of access to usable broadband-enabled devices, and lack of knowledge (or "literacy") of how to use the internet in ways that are meaningful, useful, and safe. We will also seek to identify targeted solutions that would be designed to provide access, devices, and training and support, as appropriate.

### Task 1: Conduct On-Site Strategy Session

CTC will hold a half-day on-site strategy session in Cambridge to review and confirm the project plan and make any needed adjustments. Topics for the strategy session include:

- Confirm roles and responsibilities of CTC, the City, the City's Community Engagement Team (CET), and any other City staff or departments
- Review schedule and deliverables
- Discuss questions and structure for discussion groups
- Review draft baseline survey structure and release process

In addition, during the session we will review and confirm any data confidentiality measures to be followed during this study. For many important reasons, including the need to be able to assure survey subjects that their data will be kept confidential and their privacy will be respected, we know that the City wishes to proceed with extreme care in this regard. For that reason, we recommend a few strategies to protect personally identifiable information (PII) throughout this process:

1. CTC should not have access to City databases of residential information, including identification of particular residents who fall into any of the categories of interest based on income level, language, or ethnicity. Rather, to facilitate the face-to-face survey and mail survey, CTC should describe to the City the recommended sampling methodology and the City should then identify the sample and provide the smaller list to CTC.
2. CTC should be obligated by contract to maintain strict security and confidentiality protocols.





3. Both the mail survey and face-to-face survey script should begin with assurances of confidentiality, and the face-to-face script should ask if the interviewee has any questions or concerns about how the data will be used.
4. No PII should be included in public documents such as data summaries or reports unless the subject has provided specific written permission.

## **Task 2: Facilitate Discussion Groups**

We understand that with respect to the City's low-income, immigrant, and other populations, community group discussions with relevant segments of these groups can help to identify and explore specific problems that might ultimately be addressed by City interventions. In this task we will confirm the format for these community group discussions, prepare and finalize the discussion points to be covered, and document the resulting discussions in up to 16 such meetings, each with a duration of about 90 minutes. The City will identify the community segments, invite individuals to these meetings, and convene the meetings at a suitable location in Cambridge.

We understand that the City's Community Engagement Team (CET) currently liaises with underserved American-born black, Bangladeshi, Chinese, Ethiopian, Haitian, Spanish-speaking, and Arabic-speaking residents of the City. The City may consider convening a group discussion with each of these communities, in the appropriate language (with any needed translation services provided by the City), as well as having a group discussion at up to five locations where disadvantaged members of the community receive services. In addition, the City may wish to convene four more meetings: two with low-income senior citizens and two with low-income Cambridge Public Schools students. These last four meetings should be arranged by relevant City departments (rather than by members of the CET) but would follow the same structure. Decisions about meetings and invitations will be made by the City in consultation with CTC.

CTC and the City will co-facilitate these meetings and pose the following questions to the attendees. These questions are designed to promote an open-ended discussion that will enable follow-up on participants' comments:

1. If you and family members do not use the internet, why don't you use it?
2. Can you describe all the places where you and family members access the internet?
3. What are your and your family members' top reasons for using the internet?
4. Are you experiencing any problems with internet service?



5. Are you able to readily use websites for local government, banking, legal, and educational resources?
6. What is most important to you about using the internet?
7. If any assistance for using the internet were to be provided, what should it be?

Following the meetings, CTC will write a report summarizing what was discussed and highlight any commonalities. Findings from the group discussion will assist in refining questions for the face-to-face interviews.

### **Task 3: Facilitate Face-to-Face Interviews**

This task focuses on the goal of conducting face-to-face interviews with up to 320 members of the populations the City wishes to serve through this effort. The scripts for this face-to-face survey—and also the mail survey described in the next task—will include questions developed with feedback and insights from the community discussion groups to generate high-quality data on the pervasiveness and extent of the problems and barriers identified during those discussions.

#### ***Conduct Detailed Planning for Face-to-Face Interviews***

CTC will develop and design a face-to-face survey instrument. To enable comparison of the face-to-face survey data with the mail survey data described in the next task, it is important that the questions asked in the two be similar. The two surveys should be developed in tandem, with additional questions included in the face-to-face survey script intended to elicit anecdotes and experiences.

CTC will work with the City to generate a statistically valid sample of adult individuals from each target group, plus a random sampling of other low-income residents. We recommend that the City complete interviews with a randomly selected subset of each of the various ethnic groups with which the CET works, as well as with a similar random sampling of other low-income residents who are not members of these groups. The goal will be to conduct 320 interviews. This sample size is sufficient to enable comparative analysis against the results of the mail survey, which (as discussed below) is likely to under-represent lower-income residents.

#### ***Conduct Face-to-Face Interviews***

As noted in the RFP—and to maintain a level of trust with interviewees—the City team will be central to administration of the face-to-face survey. We recommend that given the trust factor, we work with the CET to train and provide them with scripts and tools. CTC will conduct two half-day training sessions for the CET or other staff to educate them about proper face-to-face survey procedures. CTC will also produce paper versions of the survey for CET to use in carrying out the





survey. A CTC staff member will spend one full work week joining members of the CET on their initial interview efforts.

After this initial week, the CET will work independently for an additional two weeks on these surveys (as time allows, and at the City's discretion). At that point, we will have a mid-point check-in. For any interviews not completed by that point, the CET will return to each residence; if the resident is not home, the CET will leave the survey with a letter asking the resident to mail in the survey. Two weeks after this occurs, we will have another check-in and CTC will confer with the City on next steps. If responses do not total at least 250, CTC and the City will confer on next steps.

At that point the City may elect to separately and directly contract with a local, specialized survey team that has experience in conducting face-to-face surveys. We note that the risk here is that this new entrant might not have the same trust factor with the target population and could end up interrupting the process. Alternatively, CTC and the City may choose to keep trying with the CET, or to revise the scope of the face-to-face task to make the best use of the responses that did come back. We note that even if these responses are anecdotal rather than statistically valid, they would still be an extremely valuable and unique data resource that stands a strong chance of providing the City with important insights about the broadband gaps the City is seeking to identify.

#### **Analyze Face-to-Face Interview Results and Produce Report**

CTC will analyze the results of the face-to-face survey and will prepare a written report, which it will provide to the City as an intermediate deliverable.

#### **Task 4: Conduct Baseline Residential Survey**

To generate baseline data, we will conduct a mail survey of a random sampling of the entire Cambridge population; the survey will comprise a core set of questions about broadband services, adoption, and use. This rigorous and statistically valid survey will enable the City to gather important baseline information that can be updated on a periodic basis to determine changes over time and the efficacy of City interventions.

CTC will mail 3,000 surveys with a goal of receiving 450 completed and returned surveys. This number of responses would result in a 95 percent confidence level with a margin of error less than 5 percent. Mail surveys are preferable to phone surveys, which tend to over-represent older residents (in large part because younger residents are unlikely to have landline phones—and reliable, geographically based cell-phone number databases do not exist). Still, the baseline survey results may under-represent low-income and immigrant Cambridge residents. This is because participation in surveys frequently aligns with age, education, and income level, and



because an English-language survey may inevitably limit participation by people for whom English is not the first language. To adjust for this bias, our analysis includes weighting of results to census-based demographic data.

We will obtain the survey mailing list from InfoUSA. Alternatively, if the City has a reliable database of residential addresses, the random sampling can be drawn from that database.

#### **Task 5: Analyze FCC Pricing and Service Data**

We will perform outreach and collect available data in an effort to determine how many Cambridge residents use Comcast's low-cost Internet Essentials service or receive the FCC's \$9.25 monthly subsidy for broadband through its Lifeline program. We will also ask the City to generate a count of how many Cambridge residents the City determines might be eligible for these programs based on income or participation in certain assistance programs. The goal of this task is to identify whether a gap exists between eligibility and adoption.

We will undertake the following efforts to gather these data:

- Request that Comcast share data about Internet Essentials utilization in the City
- Query school officials and other City agencies to determine the number of students and families who are eligible for subsidized services and the number who are using the service
- Request that the FCC share any data on the use of Lifeline in Cambridge
- Potentially include questions about the use of these programs in the face-to-face interviews and written surveys

We note that many of the entities holding these data may be resistant to sharing, even with confidentiality guarantees.

#### **Task 6: Analyze Consumer Pricing and Service Data**

We will collect data on service availability and pricing from a range of sources to understand patterns and potential correlation with demographic factors such as income level. While the data will not speak to causation, the correlation is important when considering existing gaps and barriers to broadband use.

We will attempt to collect the following data:

- FCC Form 477, which includes some availability and adoption data
- Data from consumer bills that demonstrate costs and service levels

- FCC Form 481, which includes some pricing data
- Market data, to be collected through online and phone research of internet service provider (ISP) service offerings

We will then map any data obtained against median household income as estimated by the American Community Survey (ACS) within each of the City's census tracts to determine whether there are any areas of the City where relatively high or low median household income (or other demographic factors) correlates with levels of broadband availability, speed, price, and adoption.

To the extent the data are sufficient, we will use a shading mechanism on the maps so that the different data sets can then be overlaid and compared. This comparison would be qualitative—noting any tracts (or groups of tracts) in the City that are shaded similarly.

#### ***FCC Form 477 Data***

To analyze broadband availability and adoption, we will obtain the most recent available data from the FCC as reported by providers in Form 477. This may help the City understand what internet connectivity technology is available and the number of residential connections per 1,000 households in each census tract. These data, which are reported to the FCC bi-annually by internet service providers, indicate where wireline broadband service is available (and with what technology) and the percentage of households subscribing to each service. This information is then aggregated and summarized by the FCC and released to the public roughly one year after collection.

Census tracts are defined by geographical boundaries (rather than population) and contain from 1,200 to 8,000 people. As a result, it is impossible to use Form 477 data to obtain a definitive number of how many households subscribe to internet services. Rather, the most recent available data will show the percentage of households receiving a service of a minimum of 200 Kbps one way, and a minimum of 10 Mbps/1 Mbps (downstream/upstream) within the census tracts in a given community.

Each provider reports census tracts where its services are “available,” as indicated by its ability to provide services to at least one household in the census tract “within a reasonable amount of time,” and reports the technology (e.g., VDSL, cable modem, fiber-to-the-user, satellite).

Adoption data is available as a raw set showing the number of residences within a census tract that have a given speed, expressed as an integer that represents a percent range (i.e., 0 to 20 percent of houses = 1; 21 to 40 percent of houses = 2; 41 to 60 percent of houses = 3; 61 to 80 percent of houses = 4; 81 to 100 percent of houses = 5).





Based on the data, we will analyze and map Cambridge census tracts by levels of adoption. In addition, we will use Form 477 data to identify census tracts within the City where broadband providers report that their respective services are available. We will then develop maps based on each provider's reported availability to visualize the data with respect to location.

We note that the information used in this analysis is at a very high level—a provider can report that service is available to a given census tract so long as one household within that tract can be connected within “a reasonable amount of time.” Although a good indicator of availability, these data do not necessarily indicate that services are currently widely deployed within a given tract. Additionally, adoption data is merely reported on a five-point scale, wherein each point value indicates a range of total numbers of households connected. Further, data are released roughly a year after the forms are submitted, further compounding the problems in achieving an accurate analysis.

### ***Data from Consumer Bills***

We will include questions in our face-to-face survey design that are intended to facilitate collection of data from the residential broadband bills of the City residents with whom the survey team will be interacting. These additional questions will be designed to obtain participants' permission to view their bills. The purpose is to develop data regarding what consumers are paying, what services they receive, how pricing may differ among customers, and to what extent City residents use data-only plans or take bundled plans with video. This otherwise hard-to-obtain data can be powerful in helping to understand broadband use in Cambridge.

We will submit the final drafts of all questions related to this effort to the City for review and approval before any collection of information begins.

### ***FCC Form 481 Data***

We will ask the FCC to provide us with all available pricing data that pertains to providers operating in Cambridge, including Form 481 data. Form 481 is a little-known form that subsidized telephone companies (such as Verizon) are required to file regarding pricing.

The FCC annually collects information on ISP pricing through two different vehicles. The first is an annual rate survey, which is used to create benchmarks for broadband pricing for recipients of certain subsidies, particularly for high-cost support under the Universal Service Fund. A sample is gathered from both incumbents and non-incumbents.

In addition, every incumbent eligible telecommunications carrier (ETC) that receives these subsidies is annually required to submit information about its pricing down to the exchange level on Form 481. To our knowledge, the resulting data has never been released publicly by the FCC.



The data will be incomplete, because the forms are required only of subsidized incumbent telecommunications carriers (such as Verizon) and not cable operators (such as Comcast) or other non-incumbent ISPs. But the data set may include data about pricing for Verizon DSL service in Cambridge and, even if it does not, it can allow for comparison of Verizon's pricing in Cambridge and in other parts of the country.

### **Market Data**

We will review websites of broadband providers operating in Cambridge and conduct phone inquiries to determine what broadband products are available to residential customers at a randomly selected address in each of 13 Cambridge neighborhoods, and the general advertised pricing at each of those addresses.

If the research indicates broadband service is not available from one or more providers, we will inquire to identify how much customers would have to pay the incumbent providers to get the necessary infrastructure built to them. (These types of costs are calculated on a case-by-case basis, so these cost samples would be anecdotal.)

Ideally, this service and pricing analysis will enable the City to further understand what kind of infrastructure and services are available in each part of the City. The data will need to be collected in this way because the industry does not generally share granular data on these topics. The approach may provide further understanding of competition gaps, affordability gaps, and service gaps.

An additional reason for this effort is to vet the FCC's Form 477 data, which are self-reported by the carriers. It is not uncommon to find that neighborhoods that appear to have certain kinds of service (such as DSL) still have supply issues, and that consumers are not able to order new service even though the neighborhood is shown as "served" in the FCC's data.

### **Task 7: Conduct Expert Interviews**

We will conduct interviews with academics and city practitioners who are either studying or working on implementing digital equity plans elsewhere in the United States. The goal of these interviews is to determine how the City's findings compare with those of other communities and to learn about successful interventions undertaken in other cities. Specifically, we will interview the following researchers and practitioners:

- **Dr. Colin Rhinesmith**, Assistant Professor in the School of Library and Information Science at Simmons College, and a faculty associate with the Berkman Klein Center for Internet & Society at Harvard University. His research focuses on digital equity and community technology, and he has studied city digital equity planning.





- **David Keyes**, Digital Equity Manager for the City of Seattle, who has used data to document community needs and direct programs, and engaged with local elected officials, businesses, education partners, and community organizations in implementing solutions.
- **Rondella Hawkins**, Telecommunications and Regulatory Affairs Officer for the City of Austin, Texas, who is responsible for implementing the City's Digital Inclusion Strategic Plan to ensure that all Austin residents have the information technology capacity needed for civic and cultural participation, employment, and access to essential services.
- **Rebecca Gibbons**, Digital Equity Program Coordinator, and **Julie S. Omelchuck**, Program Manager, Office of Community Technology, City of Portland, Oregon, who are jointly responsible for carrying out Portland's Digital Equity Action Plan.
- **Mary Beth Henry**, former Director of the Office of Community Technology in Portland, who conceived and developed Portland's Digital Equity Action Plan.
- **Anne Schweiger**, Digital Equity Manager, City of Boston, who works on a variety of projects within the City of Boston to help citizens obtain affordable and fast broadband, and who served on the Cambridge Broadband Task Force.

### **Task 8: Prepare and Present Final Report**

As mentioned above, CTC concurs with the project timetable as presented in the RFP, and will follow that timetable and work plan. Our final deliverable will be a digital equity analysis report that summarizes our findings and recommends strategic approaches and roadmaps of concrete actions for the City's consideration. The report will include all the data analysis and insights developed in the earlier tasks as well as a series of recommendations—short, medium, and long-term—addressing the challenges and gaps identified by the research in those tasks.

The deliverable will be a substantial body of work, designed to serve as a roadmap for efforts that can be undertaken by both the public and private sectors to address digital inequities. The report will also be designed to serve as a baseline for understanding the current state in Cambridge and for measuring improvements in the future.

## Attachment A: Required Forms

### Quality Requirements Form

#### Quality Requirements:

A “No” response, a failure to respond, or a failure to meet any of these Quality Requirements will result in the rejection of your bid. Please check “Yes” or “No” for each of the following requirements.

1. The Consultant is independent of and does not have business ties with wireless carriers, internet service providers, equipment vendors, or construction contractors.

☒ X ☐ YES ☐ NO

2. The Consultant is experienced in infrastructure engineering, market assessment, business planning (supply side and demand side), strategic planning, statistically valid mail surveys, and expert analysis of survey results.

☒ X ☐ YES ☐ NO

3. The Consultant has experience working in the Boston metro area and shall have a project manager who is based in the Boston metro area.

☒ X ☐ YES ☐ NO

4. The Consultant has experience working with towns or cities that are home to major universities, and with the unique broadband characteristics and needs of these localities.

☒ X ☐ YES ☐ NO

5. The Consultant has experience working with community advisory boards that advise cities and that have representatives from local universities and nonprofits.

☒ X ☐ YES ☐ NO

6. The Consultant’s proposed Project Team members have in the aggregate at least ten (10) years of experience performing the services defined within the scope of this RFP.

☒ X ☐ YES ☐ NO



## Anti-Collusion and Tax Compliance Form

**Americans with Disabilities Act (42 U.S.C. 12131)  
Section 504 of the Rehabilitation Act of 1973  
Tax Compliance/Anti-Collusion Statement  
Debarment Statement**

The Americans with Disabilities Act (the "Act") applies to all employers of fifteen or more employees. All vendors that are subject to the Act must comply with its provisions. In further compliance with the Act, all Contractors who enter into contracts with the City are prohibited from discrimination against the City's employees, regardless of the size of the Contractor.

The Act protects against discrimination on the basis of "disability", which is defined as a physical or mental impairment that substantially limits at least one "major life activity"; discrimination against a person having a history or record of such impairment; and discrimination against an individual regarded - even if inaccurately - as having such an impairment. The Act also expressly prohibits discrimination that is based on an individual's relationship or association with a disabled person.

The Contractor shall not discriminate against any qualified employee or job applicant with a disability and will make the activities, programs and services covered by any contract awarded through this procurement readily accessible to and usable by individuals with disabilities. To be qualified for a job, or to avail oneself of the Contractor's services, the individual with the disability must meet the essential eligibility requirements for receipt of the Contractor's services or participation in the Contractor's programs or activities with or without: 1) reasonable modifications to the Contractor's rules, policies and practices; 2) removal of architectural, communication, or transportation barriers; or, 3) provisions of auxiliary aids and services.

By submitting its contract, the Contractor certifies to the City of Cambridge that it understands and will comply with all applicable provisions of the Act, including compliance with applicable provisions of Section 504 of the Rehabilitation Act of 1973, if the Contractor is receiving federal funds.

The undersigned certifies under penalties of perjury that this contract has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

As required by M.G.L. c. 62C, §49A, the undersigned certifies under the penalties of perjury that the Contractor has complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

The undersigned certifies that it is not currently subject to any State or Federal debarment order.

Date: 3/20/2019

Joanne Hovis

(Print Name of person signing bid)

Joanne S. Hovis, President

(Signature & Title)

**This form must be submitted with your bid**





## CORI Compliance Form

### CORI COMPLIANCE FORM

Persons and businesses supplying goods and/or services to the City of Cambridge ("Vendors"), who are required by law to perform CORI checks, are further required by Section 2.112.060 of the Cambridge Municipal Code to employ fair policies, practices and standards relating to the screening and identification of persons with criminal backgrounds through the CORI system. Such Vendors, when entering into contracts with the City of Cambridge, must affirm that their policies, practices and standards regarding CORI information are consistent with the policies, practices and standards employed by the City of Cambridge as set forth in the City of Cambridge CORI Policy ("CORI Policy") attached hereto.

#### CERTIFICATION

The undersigned certifies under penalties of perjury that the Vendor employs CORI related policies, practices and standards that are consistent with the provisions of the attached CORI Policy. **All Vendors must check one of the three lines below.**

1. \_\_\_\_\_ CORI checks are not performed on any Applicants.
2. \_\_\_\_\_ CORI checks are performed on some or all Applicants. The Vendor, by affixing a signature below, affirms under penalties of perjury that its CORI policies, practices and standards are consistent with the policies, practices and standards set forth in the attached CORI Policy.
3. ☒ CORI checks are performed on some or all Applicants. The Vendor's CORI policies, practices and standards are not consistent with the attached CORI Policy. Please explain on a separate sheet of paper.

Joanne Hovis

(Typed or printed name of person  
signing quotation, bid or proposal)

*Joanne S. Hovis*

Signature

Columbia Telecommunications Corporation dba CTC Technology & Energy  
(Name of Business)

#### **NOTE:**

The City Manager, in his sole discretion may grant a waiver to any Vendor on a contract by contract basis.

#### **Instructions for Completing CORI Compliance Form:**

A Vendor should not check Line 1 unless it performs NO CORI checks on ANY applicant. A Vendor who checks Line 2 certifies that the Vendor's CORI policy conforms to the policies, practices and standards set forth in the City's CORI Policy. A Vendor with a CORI policy that does NOT conform to the City's CORI Policy must check Line 3 and explain the reasons for its nonconformance in writing. Vendors who check Line 3 will not be permitted to enter into contracts with the City, absent a waiver by the City Manager.

**This form must be submitted with your bid.**

Please note, in reference to our selection above: Criminal background checks are performed on all potential new CTC hires (with the permission of the applicant) via Pinkertons. This is a general requirement for all new employees.



## Wage Theft Prevention Certification

### WAGE THEFT PREVENTION CERTIFICATION

In Executive Order 2016-1, the City of Cambridge established requirements for City contracts in an effort to prevent wage theft. Prospective vendors must provide the following certifications or disclosures with their bids/proposals. Failure to provide the following shall result in rejection of the bid/proposal.

#### **Instructions for this form:**

A prospective vendor must check box 1 or box 2, as applicable, as well as boxes 3-5, and must sign this Form, certifying compliance with the requirements set out in this Form. This Form must be included with the bid or proposal, and for multi-year contracts must be completed annually on the contract anniversary and filed with the Purchasing Agent.

The undersigned certifies under the pains and penalties of perjury that the vendor is in compliance with the provisions of Executive Order 2016-1 as currently in effect.

#### **All vendors must certify that [check either box 1 or box 2, as applicable]:**

1. ☒ Neither this firm nor any prospective subcontractor has been subject to a federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal submission.

OR

2. ☐ This firm, or a prospective subcontractor of this firm, has been subject to a federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal submission and such documentation is included in the bid/proposal submission.

#### **In addition, all vendors must certify each of the following:**

3. ☒ Any federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* imposed on this firm or on any prospective subcontractor while any bid/proposal to the City is pending and, if awarded a contract, during the term of the contract, will be reported to the Purchasing Agent or other City department within five (5) days of receiving notice.



4. ☒ Vendors awarded a contract that have disclosed a federal or state criminal or civil judgment, administrative citation, final administrative determination, or order resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal, while the bid/proposal was pending, or during the term of the contract shall, upon request, furnish their monthly certified payrolls for their City contract to the Purchasing Agent for all employees working on such contract and are required to obtain a wage bond or other suitable insurance in an amount equal to the aggregate of one year's gross wages for all employees. Vendors subject to a state or federal debarment for violation of the above laws or prohibited from contracting with the Commonwealth are prohibited from contracting with the City, and upon a finding or order of debarment or prohibition, the City may terminate the contract.
5. ☒ Notice provided by the City, informing employees of the protections of Executive Order 2016-1 and applicable local, state, and federal law will be posted by this firm in conspicuous places.

Attested hereto under the pains and penalties of perjury:

Joanne Hovis

(Typed or printed name of person signing  
quotation, bid or proposal)

Joanne S. Hovis

Signature

Columbia Telecommunications Corporation dba CTC Technology & Energy

(Name of Business)

Pursuant to Executive Order 2016-1, vendors who have been awarded a contract with the City of Cambridge must post the Massachusetts Wage and Hour Laws notice informing employees of the protections of G.L. c. 149, G.L. c. 151, and 21 U.S.C. 201 *et seq.* in conspicuous places. This notice can be found at <http://www.mass.gov/ago/docs/workplace/wage/wagehourposter.pdf>





## Attachment B: CTC Resumes

### Joanne S. Hovis, Esq. | President

Joanne Hovis is a nationally recognized authority on broadband markets and on the evolving role of public-private partnerships in the provision of communications services to the public. For more than 20 years, she has overseen all client relationships and directed consulting services related to strategic planning, business modeling, and financial analysis for CTC's hundreds of clients nationwide.

Joanne leads the CTC teams that advise the states of Connecticut, New Mexico; the cities of Atlanta, Boston, San Francisco, Seattle, and Washington, D.C.; and the statewide broadband networks in Colorado, Maryland, and Pennsylvania. She also leads CTC's consulting on federal funding programs such as E-Rate, the Connect America Fund Phase II, and the Healthcare Connect Fund.

She has testified before Congress on rural broadband and the digital divide, and has provided expert presentations to the Federal Communications Commission, the U.S. Conference of Mayors, the National League of Cities, and other national organizations.

Joanne is also CEO of the Coalition for Local Internet Choice (CLIC) and a member of the boards of directors of the Benton Foundation and the Fiber Broadband Association. She is a former president of the National Association of Telecommunications Officers and Advisors (NATOA).

#### Public-Private Partnership (P3) Planning and Negotiations

Joanne has spearheaded projects that explore a range of business models by which local and state government clients can leverage their assets to build or expand fiber networks, and to incentivize private sector broadband expansion.

- Joanne has provided extensive business planning, market assessment, and strategic planning for the **City and County of San Francisco** over a dozen years. In 2018, she played a key role in the project team that developed an innovative partnership strategy for deploying a ubiquitous fiber-to-the-premises (FTTP) network. In an earlier project that laid the groundwork for the city's current efforts, Joanne conducted an independent evaluation of the feasibility of San Francisco constructing and operating such a network.
- Joanne prepared a fiber feasibility study and business case for the **City of Westminster, Maryland** in 2012 and 2013. Following the city's decision to move forward with FTTP pilot projects designed by CTC engineers, Joanne assisted the city in identifying and negotiating with a private partner to assume operating risk in providing services to the public over the city's FTTP infrastructure.
- Joanne has been the strategic and business planning consultant to the **Urbana-Champaign Big Broadband (UC2B) Coalition (University of Illinois and the cities of Champaign and Urbana)** for more than eight years. Following construction of the coalition's middle-mile network to connect anchor institutions, she wrote an RFI to enable



the coalition to identify a private partner that would finance and operate an FTTP expansion. She evaluated potential partners' proposals, then helped negotiate with two partners to reduce the community's risks and ensure that a partnership would achieve economic development and digital inclusion goals. As a result of the final partnership, UC2B secured an open access gigabit FTTP network buildout.

#### **Business Planning and Feasibility Analysis**

Joanne is sought nationwide as an expert in municipal broadband business models and planning. Among the projects she has led are the following CTC engagements:

- Joanne advised the **City of Atlanta** on strategic and tactical approaches it can take to plan, build, and operate its own fiber network to cost-effectively serve its internal needs, promote private sector broadband investment, and enable competition in the City's residential and business broadband markets. She assisted the City in its discussions with telecommunications providers about options for joint build and partnership.
- Joanne has advised the **City of Seattle** regarding business planning strategies for a citywide fiber enterprise and facilitating equitable access to wireless broadband services. In her report on citywide fiber, she analyzed the public subsidies a network would require and delivered a full assessment of opportunities and risks. The report included an internal needs analysis, statistically significant market research, an assessment of competing services and technologies, and an evaluation of the business case and financial risks. Joanne led further analysis of the benefits of FTTP beyond the traditional balance sheet, including cost avoidance.
- Joanne advises the **State of New Mexico's Department of Information Technology** on broadband planning. She led a team of analysts that produced a guidebook for New Mexico's local governments on the business, financial, and strategic planning necessary to implement city- or county-owned broadband networks. The guidebook discusses strategies for exploring public-private partnerships to facilitate broadband expansion.
- Joanne supported the **State of Kansas Department of Commerce** on a needs assessment of the state's network infrastructure. She conducted major market surveys of core sectors across the state (residents, businesses, and community anchor institutions) to evaluate the current uses and needs of broadband infrastructure. She also developed a strategy for the evolution of Kan-ed, the state-created broadband program that serves schools, hospitals, libraries, and higher education institutions.
- Joanne has advised officials in the **District of Columbia** government on a range of telecommunications and fiber optic projects for almost a decade. She worked with the Office of the Chief Technology Officer (OCTO) to create a business plan and strategy for building a municipal fiber optic network with a wireless overlay in the least-served wards of the city. She performed a business case and technology analysis for DC-Net, a fiber optic telecommunications network that provides voice and data services for the District. She analyzed governmental, educational, and public safety uses of the network.



- Joanne devised a business strategy and wrote a business plan for **KINBER**, the statewide backbone and middle-mile fiber infrastructure focused on the higher education and healthcare sectors in Pennsylvania. One highlight of the KINBER strategy was developing an actionable plan to increase early cash flow.
- Joanne developed a broadband feasibility study for **Garrett County, Maryland**, with a focus on maximizing the benefits and use of the state's grant-funded fiber backbone. That initial analysis led to strategic planning and support for the county's successful Appalachian Regional Commission grant funding and a pioneering public-private partnership that has deployed TV White Spaces wireless service to unserved rural parts of the county.

#### Federal Funding and Grant Planning

Joanne's expertise includes the funding opportunities available to local government broadband planners through the federal government and other sources. She has guided clients through project planning, application writing, and fund management. Her work on behalf of clients has included successful applications for funding from a range of programs, including E-rate, Rural Utilities Service (RUS), Broadband Technology Opportunities Program (BTOP), Public Safety Interoperable Communications (PSIC), the Appalachian Regional Commission (ARC), and the Department of Homeland Security's Urban Areas Security Initiative (UASI).

#### Speaking and Advocacy

Joanne is in wide demand as a speaker and expert source on broadband deployment and public-private partnership issues. She has testified before the U.S. Congress on matters of broadband deployment and policy; has been interviewed by publications including *Business Week*, *The Washington Post*, *The New Yorker*, and *The Baltimore Sun*; and has been featured on C-SPAN's "The Communicators."

She has provided expert presentations to the Federal Communications Commission, the U.S. Conference of Mayors, the National League of Cities, the Broadband Communities Summit, Technology Policy Summit, the University of Illinois, Case Western Reserve University, the New America Foundation, and the Congressional Internet Caucus.

#### **EDUCATION**

***Juris Doctor, with honors***, University of Chicago Law School, 1994

***Bachelor of Arts, with distinction***, University of Wisconsin, Madison, 1990

#### **PROFESSIONAL CERTIFICATIONS/LICENSES**

Member of Illinois Bar Association

Member of District of Columbia Bar Association

#### **ORGANIZATIONS**

- Coalition for Local Internet Choice, CEO
- Benton Foundation, Director
- Fiber Broadband Association, Director





- Consumer Reports, Director
- United States Unified Community Anchor Network, Task Force on Community Anchor Network Economic Models, Charter Member
- National Association of Telecommunications Officers and Advisors, Past President

**PRIOR TO COMING TO CTC IN 1997**

1996–1997     Litigation/Communications Attorney  
Mintz, Levin, Cohn, Ferris, Glovsky, & Popeo P.C., Washington, D.C.

1994–1996     Litigation Attorney  
Jenner & Block, Chicago

**SELECTED PUBLICATIONS**

- “Leaping the Digital Divide: Encouraging Policies and Partnerships to Improve Broadband Access Across North Carolina,” co-author, published by the North Carolina League of Municipalities, 2018
- “The Emerging World of Broadband Public–Private Partnerships: A Business Strategy and Legal Guide,” co-author, published by the Benton Foundation, 2017
- “The Atomic Age of Data: Policies for the Internet of Things,” contributor as participant at the Aspen Institute Conference on Communications Policy, 2015
- “The Art of the Possible: An Overview of Public Broadband Options,” with the New America Foundation, 2015
- “Better Communities through Better Broadband: A Coalition of Public and Private Interests Affirms the Need for Local Internet Choice,” Benton Foundation Blog, 2015
- “The Killer App for Local Fiber Networks,” *Broadband Communities* magazine, November/December 2014
- “Gigabit Communities: Technical Strategies for Facilitating Public or Private Broadband Construction in Your Community,” 2014—an independent report sponsored by Google as a guide for local government leaders and planners
- “How communities can facilitate fiber construction,” Google Fiber Blog, 2014
- “Facilitating Broadband Construction,” *Broadband Communities* magazine, January/February 2014



## **Andrew Afflerbach, Ph.D., P.E. | CEO and Chief Technology Officer**

Dr. Andrew Afflerbach specializes in the planning, designing, and implementation oversight of broadband communications networks, smart cities strategies, and public safety networks. His expertise includes state-of-the-art fiber and wireless technologies, the unique requirements of public safety networks, and the ways in which communications infrastructure enables smart and connected applications and programs for cities, states, and regions.

Andrew has planned and designed robust and resilient network strategies for dozens of clients, including state and local governments and public safety users. He has delivered strategic technical guidance on wired and wireless communications issues to cities, states, and national governments over more than 20 years. He has advised numerous cities and states, including New York City, San Francisco, Seattle, Atlanta, Washington, D.C., and Boston, and served as a senior adviser to Crown Fibre Holdings, the public entity directing New Zealand's national fiber-to-the-home project.

In addition to designing networks, Andrew testifies as an expert witness on broadband communications issues. And he is frequently consulted on critical communications policy issues through technical analyses submitted to the Federal Communications Commission (FCC) and policymakers. He has prepared white papers on:

- Estimating the cost to expand fiber to underserved schools and libraries nationwide
- Conducting due diligence for the IP transition of the country's telecommunications infrastructure
- Developing technical frameworks for wireless network neutrality
- Streamlining deployment of small cell infrastructure by improving wireless facilities siting policies
- Limiting interference from LTE-U networks in unlicensed spectrum

As CTC's Chief Technology Officer, Andrew oversees all technical analysis and engineering work performed by the firm. He has a Ph.D. and is a licensed Professional Engineer.

### **Fiber Network Planning and Engineering**

Andrew has architected and designed middle- and last-mile fiber broadband networks for the District of Columbia (Washington, D.C.); the city of San Francisco; the Delaware Department of Transportation; the Maryland Transportation Authority; and many large counties.

He oversaw the development of system-level broadband designs and construction cost estimates for the cities of Atlanta, Boston, Boulder, Palo Alto, Madison, and Seattle; the states of Connecticut and Kentucky; and many municipal electric providers and rural communities. He is overseeing the detailed design of the city-built fiber-to-the-premises (FTTP) networks in Westminster, Maryland; Alford, Massachusetts; and Holly Springs and Wake Forest, North Carolina.

In Boston, Andrew led the CTC team that developed a detailed RFP, evaluated responses, and participated in negotiations to acquire an Indefeasible Right of Use (IRU) agreement with a fiber vendor to connect schools, libraries, public housing, and public safety throughout the City. This approach was designed to allow the City to oversee and control access and content among these facilities.



### Wireless Network Planning and Engineering

Applying the current state of the art—and considering the attributes of anticipated future technological advancements such as “5G”—Andrew has developed candidate wireless network designs to meet the requirements of clients including the cities of Atlanta, San Francisco, and Seattle. In a major American city, Andrew led the team that evaluated wireless broadband solutions, including a wireless spectrum roadmap, to complement potential wired solutions.

In rural, mountainous Garrett County, Maryland, Andrew designed and oversaw the deployment of an innovative wireless broadband network that used TV white space spectrum to reach previously unserved residents. To enhance public internet connectivity, Andrew provides technical oversight on CTC’s Wi-Fi-related projects, including the design and deployment of Wi-Fi networks in several parks in Montgomery County, Maryland.

Andrew also advises local and state government agencies on issues related to wireless attachments in the public rights-of-way; he leads the CTC team that supports the Texas Department of Transportation (TxDOT) and many large counties on wireless attachment policies and procedures.

### Public Safety Networking

Andrew leads the CTC team providing strategic and tactical guidance on FirstNet (including agency adoption and other critical decision-making) for the State of Delaware and Onondaga County, New York. In the District of Columbia, he and his team evaluated the financial, technical, and operational impact of building the District’s own public safety broadband network, including the design of an LTE system that provided public-safety-level coverage and capacity citywide. This due diligence allowed the District to make an informed decision regarding opting in or out of the National Public Safety Broadband Network.

Andrew currently is working with the State of Delaware to evaluate LTE coverage gaps throughout the state to assist agencies in their choice of public safety broadband networks. On the state’s behalf, he and his team are also conducting outreach to AT&T and other carriers to evaluate their public safety offerings. He is performing similar work as part of CTC’s engagement with El Paso County, Colorado.

Earlier, Andrew led the CTC team that identified communications gaps and evaluated potential technical solutions for the Baltimore Urban Area Security Initiative (UASI), a regional emergency preparedness planning effort funded by the U.S. Department of Homeland Security (DHS).

He previously served as lead engineer and technical architect for planning and development of NCRnet, a regional fiber optic and microwave network that links public safety and emergency support users throughout the 19 jurisdictions of the National Capital Region (Washington, D.C. and surrounding jurisdictions), under a DHS grant. He wrote the initial feasibility studies that led to this project for regional network interconnection.

### Smart Grid

Andrew and the CTC team provided expert testimony and advisory services to the Public Service Commission of Maryland regarding Advanced Metering Infrastructure (AMI). CTC provided objective guidance to the staff as it evaluated AMI applications submitted by three of the state’s investor-owned utilities (IOUs). This contract represented the first time the PSC staff had asked a consultant to advise them on technology—a reflection of the lack of standards in the Smart Grid arena.





### Broadband Communications Policy Advisory Services

Andrew advises public sector clients and a range of policy think tanks, U.S. federal agencies, and non-profits regarding the engineering issues underlying key communications issues. For example, he:

- Provided expert testimony to the FCC in the matter of the preparation of the **national broadband plan** as a representative of the National Association of Counties (NACo) and the National Association of Telecommunications Officers & Advisors (NATOA).
- Served as expert advisor regarding broadband deployment to the U.S. Conference of Mayors, NACo, National League of Cities, Public Knowledge, New America Foundation Open Technology Institute, and NATOA in those organizations' filings before the FCC in the matter of determination of the deployment of a **national, interoperable wireless network in the 700 MHz spectrum**.
- In connection with the FCC's ongoing **Open Internet proceeding**, advised the New America Foundation regarding the technical pathways by which "any device" and "any application" regimes could be achieved in the wireless broadband arena as they have been in the wireline area.
- Provided expert technical advice on the **700 MHz broadband and AWS-3 proceedings** at the FCC for the Public Interest Spectrum Coalition (including Free Press, the New America Foundation, Consumers Union, and the Media Access Project).
- Served as technical advisor to the **U.S. Naval Exchange** in its evaluation of vendors' broadband communications services on U.S. Navy bases worldwide.
- Advised the **U.S. Internal Revenue Service** regarding the history of broadband and cable deployment and related technical issues in that agency's evaluation of appropriate regulations for those industries.
- Advised the Stanford Law School Center for Internet and Society on the technical issues for their briefs in the **Brand X Supreme Court appeal** regarding cable broadband.

### Broadband Communications Instruction

Andrew has served as an instructor for the U.S. Federal Highway Association/National Highway Institute, the George Washington University Continuing Education Program, the University of Maryland Instructional TV Program, ITS America, Law Seminars International, and the COMNET Exposition. He developed curricula for the United States Department of Transportation.

He taught and helped develop an online graduate-level course for the University of Maryland. He developed and taught communications courses and curricula for ITS America, COMNET, and the University of Maryland. His analysis of cable open access is used in the curriculum of the International Training Program on Utility Regulation and Strategy at the University of Florida.

Andrew has also prepared client tutorials and presented papers on emerging telecommunications technologies to the National Fire Protection Association (NFPA), NATOA, the National League of Cities (NLC), the International City/County Management Association (ICMA), and the American Association of Community Colleges (AACC). He taught college-level astrophysics at the University of Wisconsin.



## EMPLOYMENT HISTORY

1995–Present                      CEO/Chief Technology Officer, CTC  
Previous positions: Director of Engineering, Principal Engineer, Senior Scientist  
1990–1996                      Astronomer/Instructor/Researcher  
University of Wisconsin–Madison, NASA, and Swarthmore College

## EDUCATION

**Ph.D.**, Astronomy, University of Wisconsin–Madison, 1996

- NASA Graduate Fellow, 1993–1996. Research fellowship in astrophysics
- Elected Member, Sigma Xi Scientific Research Honor Society

**Master of Science**, Astronomy, University of Wisconsin–Madison, 1993

**Bachelor of Arts**, Physics, Swarthmore College, 1991

- Eugene M. Lang Scholar, 1987–1991

## PROFESSIONAL CERTIFICATIONS/LICENSES

Professional Engineer, Commonwealth of Virginia and states of Delaware, Maryland, and Illinois

## HONORS/ORGANIZATIONS

- Disaster Response and Recovery Working Group, FCC’s Broadband Deployment Advisory Committee (BDAC)
- Association of Public-Safety Communications Officials (APCO)
- Board of Visitors, University of Wisconsin Department of Astronomy
- National Association of Telecommunications Officers and Advisors (NATOA) Technology and Public Safety Committees
- Armed Forces Communications and Electronics Association (AFCEA)
- Society of Cable and Telecommunications Engineers (SCTE)
- Institute of Electrical and Electronic Engineers (IEEE)
- Charleston Defense Contractors Association (CDCA)

## SELECTED PUBLICATIONS, PRESENTATIONS, and COURSES

- Declaration in Response to FCC’s Order, “Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment,” prepared for the Smart Communities and Special Districts Coalition, filed with the FCC, Sept. 2018
- Declaration in Response to the Proposed T-Mobile/Sprint Merger, prepared for the Communications Workers of America, filed with the FCC, Aug. 2018
- “A Model for Understanding the Cost to Connect Anchor Institutions with Fiber Optics” (co-author), prepared for the Schools, Health & Libraries Broadband Coalition, Feb. 2018
- “How Localities Can Prepare for—and Capitalize on—the Coming Wave of Public Safety Network Construction,” Feb. 2018
- “Network Resiliency and Security Playbook” (co-author), prepared for the National Institute of Hometown Security, Nov. 2017
- “Mobile Broadband Service Is Not an Adequate Substitute for Wirelines” (co-author; addressing the limitations of 5G), prepared for the Communications Workers of America, Oct. 2017



- "Technical Guide to Dig Once Policies," April 2017
- "Streamlining Deployment of Small Cell Infrastructure by Improving Wireless Facilities Siting Policies," prepared for the Smart Communities Siting Coalition, filed with the FCC, March 2017
- "How Localities Can Improve Wireless Service for the Public While Addressing Citizen Concerns," Nov. 2016
- "LTE-U Interference in Unlicensed Spectrum: The Impact on Local Communities and Recommended Solutions," prepared for WifiForward, Feb. 2016
- "Mobile Broadband Networks Can Manage Congestion While Abiding by Open Internet Principles," prepared for the New America Foundation's Open Technology Institute – Wireless Future Project, filed with the FCC, Nov. 2014
- "The State of the Art and Evolution of Cable Television and Broadband Technology," prepared for Public Knowledge, filed with the FCC, Nov. 2014
- "A Model for Understanding the Cost to Connect Schools and Libraries with Fiber Optics," prepared for the Schools, Health & Libraries Broadband Coalition, filed with the FCC, Oct. 2014
- "The Art of the Possible: An Overview of Public Broadband Options," prepared jointly with the New America Foundation's Open Technology Institute, May 2014
- "Understanding Broadband Performance Factors," with Tom Asp, *Broadband Communities* magazine, March/April 2014
- "Engineering Analysis of Technical Issues Raised in the FCC's Proceeding on Wireless Facilities Siting," filed with the FCC (<http://apps.fcc.gov/ecfs/document/view?id=7521070994>), Feb. 2014
- "A Brief Assessment of Engineering Issues Related to Trial Testing for IP Transition," prepared for Public Knowledge and sent to the FCC as part of its proceedings on Advancing Technology Transitions While Protecting Network Values, Jan. 2014
- "Gigabit Communities: Technical Strategies for Facilitating Public or Private Broadband Construction in Your Community," prepared as a guide for local government leaders and planners (sponsored by Google), Jan. 2014
- "Critical Partners in Data Driven Science: Homeland Security and Public Safety," submitted to the *Workshop on Advanced Regional & State Networks (ARNs): Envisioning the Future as Critical Partners in Data-Driven Science*, Internet2 workshop chaired by Mark Johnson, CTO of MCNC, Washington, D.C., April 2013
- "Connected Communities: How a City Can Plan and Implement Public Safety & Public Wireless," submitted to the International Wireless Communications Exposition, Las Vegas, March 2013
- "Cost Estimate for Building Fiber Optics to Key Anchor Institutions," prepared for submittal to the FCC by NATOA and SHLB, Sept. 2009
- "Efficiencies Available Through Simultaneous Construction and Co-location of Communications Conduit and Fiber," prepared for submittal to the FCC by the National Association of Telecommunications Officers and Advisors and the City and County of San Francisco, 2009, referenced in the National Broadband Plan
- "How the National Capital Region Built a 21st Century Regional Communications Network" and "Why City and County Communications are at Risk," invited presentation at the FCC's National Broadband Plan workshop, Aug. 25, 2009





## **Thomas J. Asp, BSEE, MBA | Principal Engineer and Analyst**

Tom Asp specializes in evaluating the financial implications of broadband and utility-automation network deployment, developing business models, and recommending strategic options for public sector clients seeking to meet their communications needs or improve the broadband market for local residents and businesses.

An MBA with an engineering background, Tom has served clients throughout the United States for more than 30 years. His experience includes electric and telecommunications system design, network feasibility, network operations planning, and emerging Smart City and Internet of Things (IoT) planning. His clients have ranged from small towns to large cities, and from rural to suburban to urban settings. He has deep experience presenting complex technical and financial analyses to elected officials.

Tom is recognized as an expert in evaluating the feasibility of public sector broadband deployment and developing public-private partnership terms that equitably distribute financial risk. He has conducted feasibility analyses related to broadband networks, often including statistically valid market research, for more than two decades, both with CTC and previously as a partner at the public accounting firm of Virchow Krause (Baker Tilley).

Tom also has significant experience evaluating cellular, cable TV, and mobile radio operations, and as a product manager in the Advanced Metering Infrastructure (AMI), Automatic Meter Reading (AMR), and Distribution Automation (DA) industries.

### **EXPERTISE**

#### **Broadband Networks (Wired and Wireless)**

Tom is one of the premiere analysts in the United States in the field of local government planning and deployment of broadband systems to meet economic development, digital inclusion, and other needs. He has assisted numerous local governments, municipal utilities, and municipal consortia to evaluate their communities' communications needs and determine the financial parameters and business case for meeting those needs.

Tom's feasibility studies include economic analysis, market assessment, technology review, vendor analysis, and business plan development. He has assisted numerous communities with evaluating the feasibility of advanced connectivity services alternatives including provider partnerships and local-government-owned networks. He has reviewed options under cable franchise agreement for municipal purchase and operation; reviewed the offerings and operations of incumbent telecommunications providers; and assisted in negotiations with incumbent telecommunications providers to both enhance the availability of existing services and encourage new and innovative offerings.

Some select examples of his projects include:



- Completed a business and technology plan for the Los Angeles Department of Water and Power (LADWP) to determine the feasibility of expanding the connectivity services offered to the businesses and institutions over the Department's fiber network. Included in the analysis was a valuation of additional fiber routes that LADWP acquired from the City of Los Angeles.
- Served as a business consultant to the City and County of San Francisco. Tom investigated the feasibility of the city building and operating a fiber-to-the-premises (FTTP) network to every home and business in San Francisco. The project included an analysis of multiple business models and business recommendations customized for San Francisco's unique circumstances.
- Developed a business case analysis for DC-Net, a District-owned and operated fiber optic telecommunications network that provides voice and data services. The network consists of resilient, interconnected fiber optic rings that connect more than 400 government buildings in the District, including the Police Department, Emergency Management Agency, and Fire Department radio towers.
- Conducted a feasibility study, a business case analysis, and an "off-the-balance-sheet" benefits analysis for a fiber-optic network proposed by the mayor of the City of Seattle. The first study, FTTP Municipal Broadband Risks and Benefits Evaluation, sponsored by Seattle City Light, included:
  - Internal needs analysis
  - Market research (residential and business)
  - Assessment of competing services and technologies
  - Evaluation of the business case and business risks

Following on that report, Tom researched and wrote an FTTP Benefits Evaluation for the City, which explored the benefits of FTTP beyond the traditional balance sheet, including cost avoidance, monetary savings, and environmental impact.

- Performed an expert assessment of a business and marketing plan for the Utah Telecommunication Open Infrastructure Agency's (UTOPIA) open access FTTP network. The project included a strategy session with key stakeholders, collection of relevant background material, an analysis of UTOPIA market research and marketing models, and an independent evaluation of UTOPIA's business plan. Tom's work focused on improving the participating UTOPIA communities' ongoing cash flow and increasing participation of households and businesses in those communities.
- Prepared a fiber optic business plan for Richland (WA) Utilities to meet the needs of city facilities, the electric utility, schools, hospitals, banks, and other institutions. Work included preparation of various business models, review of operational requirements, and preparation of pro-forma financial statements.
- Provided Jackson (TN) Energy Authority an independent evaluation of responses to JEA's 2010 request for proposals (RFP) soliciting vendors to provide wholesale voice services.



With JEA staff input, he developed the evaluation system and scoring matrix to ensure a balanced approach that best met JEA's needs. Responses were evaluated on the basis of strategic fit, operational fit, reliability, and overall cost; recommended two respondents as finalists for further consideration by JEA; and assisted JEA in negotiating with those finalists. As a final step in the process, CTC presented to JEA management a written report recommending the "best-fit" vendor.

- Provided extensive business planning assistance to the State of Maryland's One Maryland program, which built an interconnected fiber-optic broadband network that reaches every county and city in Maryland and provides backbone and middle-mile capacity for commercial carriers.
- Managed a project assisting Bountiful City, UT, with the development of a business plan for a citywide wireless network. This project included the review of a conceptual design, reviewing proposed business relationships and staffing, and conducting a cost-benefit analysis.
- Assisted Ames, IA, with the review of existing architecture, development of a network design, and preparation of detailed cost estimates for the acquisition and installation of Wi-Fi hot spots and supporting infrastructure.
- Led a consulting team in investigating several Wi-Fi deployment models, development of a business plan (including market research and financial analysis), and development of a partnership RFP for St. Louis Park, MN. Tom assisted the city to pilot the network and then prepared specifications and bid documents to identify both integrators and operators for the network.
- Assisted the City of Tucson, AZ, with a wireless feasibility study that included market research, competitive industry assessment, internal and external needs assessments, financial analysis, and the development of a business plan.
- Assisted in the implementation of an institutional fiber network (I-Net) for Norwich Public Utilities in Norwich, CT. The project included the development of a plan and strategy for NPU's fiber optic enterprise.

#### DA, AMI, AMR, SCADA

Tom has almost three decades of experience assisting municipal electric, gas, and water utilities with their automation and connectivity engineering design and analysis needs, including with Automated Meter Reading (AMR), Advanced Metering Infrastructure (AMI), Distribution Automation (DA), Demand Response (DR), Meter Data Management (MDM), and other Smart Grid technology analysis, business planning, design, and engineering.

He has assessed existing and evolving technologies and services to support AMI and DA for water, gas, and electric utilities and has developed and directed demonstration plans to test technologies to support distribution automation—including providing recommendations for establishing vendor alliances, performing research and designs networks to combine multi-utility







## Jacob Levin | Analyst and Technical Writer

### **EMPLOYMENT HISTORY**

#### **CTC Technology and Energy, Kensington, MD**

2015 – Present

- Research and write sections of strategic plans, grants, RFIs and RFPs for municipal clients
- Assess the impacts of emerging technologies on municipal broadband projects
- Recent projects include:
  - Researched and wrote recommendations for the California State Library's Broadband Initiative
  - Researched and wrote about recent and expected developments in spectrum policy and wireless innovation in New York City
  - Wrote RFI for Port of Ridgefield, WA
  - Estimated market value of municipal fiber networks in North Kansas City
  - Examined CAF-II funding opportunities for rural electrical cooperatives
  - Wrote white paper on the value of connecting local universities to a fiber network for the City of Hampton Roads, VA
  - Wrote a guidebook for the state of Connecticut to help municipalities develop their own broadband plans

#### **Researcher for Bandwidth Labs, Raleigh, NC**

2013 – 2014

Investigated disruptive communication technologies and analyzed potential impact on the telecom industry. Developed business strategy for Republic Wireless.

#### **Bandwidth.com Associate Project Manager, Cary, NC**

2010 – 2011

Worked on long-term strategic planning and product development. Managed key business partnerships and affiliate relationships. Researched market trends. Produced marketing copy.

#### **Skype Technologies SA Legal Intern, London, UK**

2009

Primarily worked on projects for the Government Relations team, including coordinating efforts across Skype to detect and respond to Internet traffic shaping techniques. Also worked on projects for the Intellectual Property and Commercial departments including patent research and contract review.

#### **One Economy Corporation Summer Intern, Washington D.C.**

2008

Did background research and ghost-wrote a conference paper on U.S. broadband policy.

#### **Public Knowledge Summer Intern, Washington D.C.**

2007

Researched and blogged on a variety of issues relating to U.S. national broadband and spectrum policy, particularly White Space and the 700 MHz auction.



## **WRITING EXPERIENCE**

**North Carolina Sustainability Connection Freelance Writer**, Raleigh, NC 2014 – present  
Research, write and upload articles about ecologically friendly business ventures in NC.

**The Redwoods Group Freelance Writer**, Morrisville, NC 2014 – present  
Create content related to risk management and innovative programing for the weekly and monthly newsletters they sent to directors of the summer camps Redwoods insures.

**Contributing Author for *The Roadmap to Generosity Farm*** 2014 – 2015  
Wrote two chapters for a book about creating a co-housing community for the elderly around a sustainable farm and CSA.

## **OTHER WORK AND ACTIVISM EXPERIENCE**

**Bullock's Permaculture Homestead Skill builder**, Deer Harbor, WA 2016  
Took part in all aspects of keeping the homestead going, including maintaining water and electrical systems. Developed gardening, landscaping and nursery management skills.

**Honeysuckle Teahouse Herb Farmer**, Chapel Hill, NC 2015 – 2016  
Manage production herb garden and direct intern and volunteer laborers.

**Open Masters**, Berkeley, CA, Washington D.C., Chapel Hill, NC. 2014 – present  
Built peer learning communities that provide structure and accountability around learning goals.

**Solidarity Piedmont Working Group (previously Occupy Chapel Hill)**, Carrboro, NC 2012  
Organized educational events about the new economy and solidarity economy movements. Mapped our local solidarity economy. Incubated time banks, coops and barter networks.

## **EDUCATION**

- Bachelor of Arts in Religion, Williams College, Williamstown, MA, 2010
- Open Masters in Practical Microbiology (in progress)

## **HONORS**

2010 Phi Beta Kappa Award

2010 Graduated with Magna Cum Laude Honors

2008–2009 Accepted and attended Williams Exeter Programme at Oxford University

2006–2010 Williams College: Dean's list all semesters





## Marc Schulhof | Senior Analyst and Technical Writer

Marc Schulhof has more than 20 years of experience in technical writing, financial journalism, and public and corporate communications. As an analyst and editor, he plays an integral role in developing CTC's client deliverables, including:

- Strategic and master plans (business and engineering)
- Needs assessments
- Feasibility studies
- Requests for proposal (RFP) and requests for information (RFI)
- Survey instruments
- Expert witness testimony
- Federal and regional grant applications
- Wireless facility siting reports
- E-rate RFPs and bids
- Research reports
- White papers

Over the course of his nine years as CTC's senior technical writer, Marc has supported dozens of CTC clients—including the District of Columbia, the states of Connecticut, Delaware, Kentucky, Maryland, and New Mexico, and the cities of Atlanta, Boston, New York, Palo Alto, San Francisco, and Seattle. He has collaborated on white papers on topics related to fiber optic and wireless technologies, including technical reports filed with the Federal Communications Commission. He is the co-author, with CTC President Joanne Hovis, of "The Emerging World of Broadband Public-Private Partnerships: A Business Strategy and Legal Guide."

Prior to joining CTC, Marc was the worldwide editor-in-chief of CIO program websites at IBM, where he established editorial direction for 36 country-specific CIO websites and worked with local editors to update each site's mix of multimedia content. He also wrote and edited feature articles and white papers on information technology and business topics.

Earlier, as a global editor at PricewaterhouseCoopers Consulting, Marc wrote and edited reports on a variety of technology and business topics. He served as daily editor of the PwC-sponsored *BusinessWeek Online Handheld Edition*, a news summary service for mobile device users in the pre-smartphone era. Marc began his career at *Kiplinger's Personal Finance Magazine*, where he researched, analyzed, and wrote about a range of complex financial issues, first as a reporter and later as an associate editor.

### EDUCATION

**Master of Science**, Journalism, Northwestern University

**Bachelor of Science**, Journalism, Northwestern University



## David Talbot | Senior Analyst

David Talbot joined CTC from the Berkman Klein Center for Internet & Society at Harvard University, where as a fellow researching community networks he convened local leaders and wrote case studies about municipal fiber business models, paybacks, and pricing.

Dave currently is serving as CTC's project manager for an I-Net replacement feasibility study for the Town of Milton and as CTC's local point of contact for fiber strategic planning for Norwich Public Utilities and Hingham Municipal Lighting Plant. He is also supporting other CTC clients around the country on policy studies and other reports.

A resident of Reading, Massachusetts, he is currently vice chairman of the Reading Municipal Light Department Board of Commissioners, giving him practical experience in local government and municipal utility governance and management in Massachusetts.

Previously, as chief correspondent at *MIT Technology Review*, the magazine and website owned by MIT, he frequently wrote about internet policy topics, emerging communications technologies, and digital divide issues.<sup>3</sup>

David's research projects at the Berkman Klein Center included the following:

- [\*Community-Owned Fiber Networks: Value Leaders in America\*](#) documented that most U.S. municipal FTTH networks offer lower and clearer prices than do incumbents when considering basic broadband service.
- [\*Enabling Competition & Innovation on a City Network\*](#) profiled Ammon, Idaho's open-access business model, which uses a lit fiber network and virtualization and is expanding based on neighborhood demand.
- [\*Smart Grid Paybacks: The Chattanooga Example\*](#) concluded that the well-known Chattanooga, Tennessee, network was sustainable thanks to utility savings and revenue even without the \$111 million federal stimulus it received.
- [\*Citizens Take Charge: Concord, Massachusetts Builds a Fiber Network\*](#) profiled the long-running effort of a Boston suburb to build a smart grid and FTTH network and overcome industry resistance.
- [\*Holyoke: A Massachusetts Municipal Light Plan Seizes Internet Access Business Opportunities\*](#) profiled the long-running effort of a western Massachusetts mill city to build a city network and then expand into serving and consulting for other municipalities.

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<sup>3</sup> <https://www.technologyreview.com/s/603083/the-unacceptable-persistence-of-the-digital-divide/>



David's earlier background is in newspaper and magazine journalism, covering stories at the nexus of government and technology and a wide range of energy technologies and climate science. His past projects include:

- [\*The Unacceptable Persistence of the Digital Divide\*](#), profiling efforts to end the digital divide in Cleveland, Ohio, through a variety of emerging technologies and programs.
- [\*The Great German Energy Experiment\*](#), a deep dive on Germany's Energiewende, the national effort to greatly ramp up renewable power and smart grid technologies
- [\*How Obama Really Did It\*](#), a look at the social networking technologies and startup companies that played a role in the 2008 election of Barack Obama
- [\*The Internet is Broken\*](#), a review of fundamental internet architecture research sponsored by the National Science to address issues of security, privacy and resilience.
- [\*China's Internet Paradox\*](#), an examination of China's censorship regime and development of China-centric e-commerce and other internet technology companies.
- [\*Saving Holland\*](#), a feature on the urban planning and modeling efforts and communication technologies aimed at protecting the Netherlands from rising sea levels and floods related to climate change.

Previously, as chief correspondent at *MIT Technology Review*, the magazine and website owned by the Massachusetts Institute of Technology, he frequently wrote about internet policy topics and emerging communications technologies.

## EDUCATION

Knight Science Journalism Fellow, Massachusetts Institute of Technology

BA, English, Colgate University, Hamilton, NY





## Price Proposal

This price summary form must be submitted in a sealed envelope, separate from the technical proposal. Failure to adhere to this instruction will result in automatic disqualification of your proposal. Price must remain firm for the entire contract unless the hourly rate is reduced.

This is a not to exceed fixed price bid. The total bid price must be complete and include all costs associated with providing the Consultant Services in accordance with the Scope of Work, Specifications and Deliverables including all other details referenced in this Request for Proposal.

Total Flat Fee \$ 189,850

Total Flat Fee in words: One hundred eighty-nine thousand eight hundred fifty dollars

Please include a supplement sheet(s) with an itemized breakdown of the fee including:

The number of hours the bidder will require to complete services: 950

Hourly Rate \$: 155 – \$225

Cost of Materials & Expenses \$: 7,340



Table 1: Itemized Breakdown of Fee – Columbia Telecommunications Corp. (d/b/a CTC Technology &amp; Energy) (CTC)

Task		Staff / Rate / Hours				Total Hours	Total Fees	Survey Expenses	Total Fees & Expenses
		President/ Director	Principal	Senior	Staff				
		\$225	\$200	\$175	\$155				
1	Conduct onsite strategy session	24	40	20	14	98	\$19,070	\$ –	\$19,070
2	Facilitate discussion groups	4	72	40	–	116	22,300	–	22,300
3	Facilitate face-to-face interviews	16	190	30	48	284	54,290	500	54,290
4	Conduct baseline residential survey	2	110	20	–	132	25,950	6,840	32,790
5	Analyze FCC pricing and service data	–	20	16	20	56	9,900	–	9,900
6	Analyze consumer pricing and service data	–	20	16	20	56	9,900	–	9,900
7	Conduct expert interviews	16	16	16	–	48	9,600	–	9,600
8	Prepare and present final report (includes meetings)	<u>40</u>	<u>60</u>	<u>60</u>	<u>–</u>	<u>160</u>	<u>31,500</u>	<u>–</u>	<u>31,500</u>
	<b>Total</b>	102	528	218	102	950	\$182,510	\$7,340	\$189,850







## **CITY OF CAMBRIDGE**

### **REQUEST FOR PROPOSALS for**

### **Digital Equity Consultant Services**

The City of Cambridge ("City") invites and welcomes sealed proposals, which must be received by the Office of the Purchasing Agent, Room 303, City Hall, 795 Massachusetts Avenue, Cambridge Massachusetts 02139 until **11:00 am on Thursday, March 28, 2019** to provide the following services:

The City of Cambridge, as Issuing Authority (the City"), is seeking proposals from qualified proposers to study and analyze gaps affecting the City's low income or otherwise disadvantaged population in use of the broadband internet. The City seeks to partner with a consultant or consultant team ("Consultant") to research and better understand the gaps-including those related to broadband access, affordability, digital skills, and device ownership-that may be preventing residents from making the most effective, meaningful use of the broadband.

Copies of the Request for Proposals ("RFP") may be obtained at the Office of the Purchasing Agent on or after **Thursday, March 7, 2019**. The hours of the Purchasing Department are as follow: Monday from 8:30 a.m. to 8:00 p.m., Tuesday through Thursday from 8:30 a.m. to 5:00 p.m., and Friday from 8:30 a.m. to 12:00 p.m. This RFP may be downloaded from the City's website: [www.cambridgema.gov](http://www.cambridgema.gov)., online services, Purchasing Bid List, Regular RFP, File No.8445. The City of Cambridge reserves the right to reject any or all proposals, waive any minor informalities in the proposal process, and accept the proposal deemed to be the most advantageous proposal.

**There must be no mention of the applicant's fee in the proposal. Any mention of the fee will subject the proposal to rejection.**

Questions from proposers concerning the RFP must be submitted in writing by **10:00 AM. on Friday, March 15, 2019**, to **Elizabeth L. Unger, Purchasing Agent**, at the address above, or by email to [Purchasing@cambridgema.gov](mailto:Purchasing@cambridgema.gov). Answers to substantive questions asked by proposers will be posted to the website in the form of an addendum. It is the responsibility of all proposers to check the website for addenda.



**Two separate sealed envelopes, a sealed envelope containing one (1) original and three (3) copies of the non-price proposal marked “Non-Price Proposal – Request for Proposal for Digital Equity Consultant Services ” and one (1) sealed envelope containing the price proposal form marked “Price Proposal - Request for Proposal for Digital Equity Consultant Services ” must be received by Elizabeth L. Unger, Purchasing Agent, City of Cambridge, 795 Massachusetts Avenue, Cambridge, Massachusetts, prior to **11:00 AM, Thursday, March 28, 2019**. Any proposals received after such time will not be accepted, unless the date and time has been changed by addendum. Delivery to any other office or department does not constitute compliance with this paragraph, unless the proposals are received by the Purchasing Agent by the established deadline.**

**Elizabeth L. Unger, Purchasing Agent City of Cambridge**

**Confidentiality and Public Records Law**

All materials submitted by the vendor in response to this RFP will be opened for inspection by any person after a decision for award has been made or until the time for acceptance specified in the request for proposals, whichever occurs earlier, in accordance with the provisions of the Massachusetts Public Records Law and Massachusetts General Laws Chapter 30B.

**This area is intentionally left blank.**



## **SECTION I: TERMS AND CONDITIONS**

The terms and conditions of any contract awarded through this procurement are attached hereto and shall be affirmed by the City and selected proposer.

1. Proposals will remain in effect for a period of ninety (90) days from the deadline for submission of proposals, or until it is formally withdrawn, a contract is executed, or this RFP is canceled, whichever occurs first.
2. A sample contract is attached. The proposer must be willing to sign the City's contract. The City will not accept a proposer's terms & conditions.
3. Rule for Award: The City will award one contract to the proposer submitting the most advantageous proposal taking into consideration the proposals' Quality Requirements, Evaluation Criteria and composite ratings, references and price. Rates must remain firm or be reduced throughout the life of the contract. A Contract will be awarded within ninety (90) days of proposal opening date unless the award date is extended by consent of all parties concerned.
4. The City of Cambridge Living Wage Ordinance is applicable. Effective March 1, 2019 the living wage rate is \$16.15 per hour.
5. The successful proposer will be bound by all Terms and Conditions set forth herein and which will be incorporated into the contract awarded.
6. Each proposer must submit a completed CORI Policy form that is included herein affirming its compliance with the City's CORI Policy.
7. Each proposer must submit a completed Wage Theft Prevention Certification that is included herein.
8. The contract period shall commence on the date of execution of the contract by the City of Cambridge and shall be in effect for a period of one year. The City reserves the option to extend the duration of the contract at the sole discretion of the City. The contract is subject to the appropriation and availability of funds. All prices must remain firm for the entire contract period.

**This area is intentionally left blank.**

## SECTION II: INSTRUCTIONS TO PROPOSERS

1. **Two separate sealed envelopes**, one sealed envelope that contains one (1) original and three (3) copies of the non-price proposal marked “**Non-Price Proposal – Request for Proposal for Digital Equity Consultant Services**” and one sealed envelope that contains one (1) original price proposal form marked “**Price Proposal – Request for Proposal for Digital Equity Consultant Services**” must be received by the Purchasing Agent, City of Cambridge, 3rd floor, City Hall, prior to **11:00 AM, Thursday, March 28, 2019**. Chapter 30B requires that price proposals be separate from technical non-price proposals. Therefore, please make no reference to price in the non-price proposal. Failure to adhere to this requirement shall result in disqualification. It is the sole responsibility of the proposer to ensure that the proposal arrives on time at the designated place. Parking is limited at City Hall, and it is strongly recommended that proposals be mailed or delivered in advance of the due date and time. Late proposals will be rejected.
2. The signature(s) of the authorized official(s) must be provided on all the proposal forms. All proposals should be double-sided in conformance with the City's recycling policy.
3. The signature(s) of the authorized official(s) should be organized and presented as directed. Accuracy and completeness are essential. The successful proposal will be incorporated into a contract. Therefore, proposers should not make claims to which they are not prepared to commit themselves contractually.
4. The Price Summary form must be completed as instructed. No substitute form will be accepted. Pricing must remain firm. The proposal submitted must be without conditions or exceptions.
5. Failure to answer any questions, to complete any form, or to provide the documentation required, will be deemed non-responsive and result in the automatic rejection of the proposal, unless the City determines that such failure constitutes a minor informality, as defined in Chapter 30B.
6. All interpretations of the RFP and supplemental instructions will be in the form of written addenda to the RFP. Proposers' questions regarding information contained in the RFP should be **sent via e-mail to [purchasing@cambridgema.gov](mailto:purchasing@cambridgema.gov)** or addressed in writing to:

Elizabeth L. Unger, Purchasing Agent  
City of Cambridge  
City Hall, 795 Massachusetts Avenue  
Cambridge, MA 02139.

No requests or questions will be accepted after 10:00 a.m. on Friday, March 15, 2019. Answers to substantive questions will be posted to the website in the form of an addendum. Oral instructions or information given to proposers by any City employee will not bind the City.

7. Proposals must be unconditional. However, prior to the proposal opening, proposers may correct, modify, or withdraw proposals by written request to Elizabeth L. Unger, Purchasing Agent, City of Cambridge, Room 303, City Hall, 795 Massachusetts Avenue, Cambridge, MA 02139. A letter will be sufficient for withdrawal of a proposal up to the date of the proposal opening. Any correction or modification to a proposal must be submitted in writing and in a sealed envelope labeled **"Requests for Proposal for Digital Equity Consultant Services Modification to (or Withdrawal of) Proposal."** The envelope must clearly specify whether the modification is a "price" or "non-price" modification.

**This area is intentionally left blank.**

### **SECTION III: EVALUATIONS OF THE PROPOSALS**

All non-price proposals will be reviewed by an Evaluation Committee composed of City staff in accordance with M.G.L. Chapter 30B. Final selection will be based on an evaluation and analysis of the information and materials required under the RFP, including information obtained by direct contact with references.

Proposals that meet the Quality Requirements will be reviewed for responses to the Comparative Evaluation Criteria. Each member of the Evaluation Committee will assign a rating as defined in this RFP to each comparative evaluation criterion. Based on the Comparative Evaluation Criteria ratings, a composite rating by the Evaluation Committee will be determined for each proposal.

References will be contacted to determine if the proposer is responsive and responsible. References will be asked about their overall impression of the proposer's quality of services performed and the timeliness of service delivery. The City reserves the right to use itself as a reference, to contact references other than those submitted by the proposer, and to otherwise perform due diligence when making a responsibility determination.

After evaluation of the non-price proposals is complete, the Purchasing Agent will open price proposals. The Purchasing Agent will determine the most advantageous proposal considering the comparative evaluation rankings and the price. Before awarding the contract, the City may request additional information from the proposer. The City reserves the right to reject any and/or all proposals.

**This area is intentionally left blank.**



## Digital Equity Research Project – Understanding the Cambridge Divide

The City of Cambridge (“the City”) is seeking proposals from qualified proposers to study and analyze gaps affecting the City’s low-income or otherwise disadvantaged population in use of the broadband internet. The City seeks to partner with a consultant or consultant team (“Consultant”) to research and better understand the gaps—including those related to broadband access, affordability, digital skills, and device ownership—that may be preventing residents from making the most effective, meaningful use of broadband.

Cambridge is a densely populated, demographically and economically diverse city with a population of over 113,000, comprising 6.25 square miles, located to the north of the Charles River across from the City of Boston. Home to Harvard University and the Massachusetts Institute of Technology, Cambridge is also home to many large and small businesses and non-profit institutions.

The City undertook a substantial research effort through its [Broadband Task Force](#) from 2014 to 2016, including a randomized telephone survey of 403 City residents. In 2016, when the Broadband Task Force concluded its work, the body advocated that a second phase of City research should include a deep examination of digital equity issues. To that end, the City is seeking to carry out a methodology for a research project (“Methodology”) that would assist the City to understand the inequities and challenges in broadband in Cambridge and to serve as a basis for the development of an actionable plan to address those challenges.

### **Summary of Types of Data to Be Collected**

The City is seeking to deploy a Methodology designed to enable collection of data that will illuminate to what degree factors, such as lack of access to affordable broadband service, lack of access to usable broadband-enabled devices, and lack of knowledge (or “literacy”) of how to use the internet in ways that are meaningful or valuable to the user, are present in Cambridge, how they relate to each other, and how they can be alleviated through targeted strategies designed to provide service access, devices, and training and support.

The Consultant on this research project should collect the following types of data:

1. Broadband service availability, pricing, and competition;
2. Broadband adoption rates and patterns;
3. Means by which community members access the internet (e.g., wireline and/or mobile) and the reasons for that choice or outcome;
4. Use of broadband subsidy programs such as Comcast’s Internet Essentials and the Federal Communications Commission’s (FCC) Lifeline program;
5. Access to broadband-enabled devices, knowledge of how to use those devices, and challenges with use (for example, viruses, maintenance costs);

6. Broadband “literacy,” or degree of knowledge of how to use the internet in ways that the user finds meaningful, useful, and safe; and,
7. Need for foreign language or culturally specific training to develop knowledge of how to use the internet.

### **Summary of Methodology for Data Collection**

The Consultant should describe how they propose to carryout out a Methodology, which shall include the following general categories of research:

- Group Discussions
  - Work with the City team to hold approximately 14 discussion groups with diverse segments of the City’s population, focused on those groups the City seeks to support with this initiative. The purpose of these discussions will be to learn about the digital challenges faced by various demographic, ethnic, and income groups.
  - The information collected in these community meetings should help inform the design of a face-to-face survey.
- Face-to-Face Survey
  - Develop and conduct a face-to-face survey of a sample of the relevant communities the City seeks to support and serve through this process. The questions used in this face-to-face survey will be informed by consultation with the City team and the discussion group sessions. The goal of these efforts is to seek insights on barriers to adoption and effective use of broadband and broadband-enabled devices.
  - The face-to-face survey should be conducted by a professional survey team, accompanied by City team members, when appropriate, to overcome language, cultural, or other barriers. The City team will also be central to administration of the face-to-face survey.
  - The sample size and selection methodology should have sufficient size to provide statistically valid data and conclusions, segmented by ethnic/language group to provide the City specific insights regarding the needs of particular communities within Cambridge.
- Mail-Based, Scientific Survey
  - Develop and perform a mail-based survey of a sample of the entire City population to provide a benchmark on basic questions related to internet access and usage, against which data from the relevant population will be compared.



- This survey must be a statistically valid survey that can provide a baseline for measuring changes going forward, including the impact of City efforts and interventions.
- Like the face-to-face survey, the mail-based survey should be designed to gather data on barriers to accessing and using broadband, computers and other devices, and online resources. The questions should also be designed to clarify what kinds of training might be helpful, and if there exist language or cultural barriers to digital learning.
- FCC Pricing and Service Data
  - Collect and analyze FCC Form 477 data, which consist of ISP-reported broadband availability and adoption levels by census tract and compare this information to City-provided demographic data to see (to the extent the data allow) whether available service levels are equitable across all City neighborhoods.
  - Obtain and analyze data from the FCC Form 481, a document that telephone companies receiving certain subsidies are required to file. Form 481 may include some Verizon DSL pricing data that could provide insights to the City.
- Consumer Pricing and Service Data
  - Gather data on utilization by City residents of Comcast's Internet Essentials service and the FCC's Lifeline subsidy for broadband service.
  - Conduct online and phone research to determine what services are available from service providers, and at what price, in various parts of the City.
  - Conduct a first-of-its-kind effort at collecting non-personally identifiable information data on residential broadband bills from City residents—to develop empirical data regarding what consumers are paying, what services they receive, how pricing may differ among customers, and to what extent City residents use data-only plans or take bundled plans with video. This otherwise hard-to-obtain data can be powerful in helping to understand broadband utilization in Cambridge.
- Conduct Expert Interviews
  - To gain additional insight about how the City's findings compare with those of other communities and to learn about successful interventions undertaken in other cities, the Methodology should include conducting interviews with academics and city practitioners who are either studying or working on implementing digital equity plans elsewhere in the United States.



This Methodology will be overseen by a City project lead and the research will be supported by a City Manager-appointed advisory board staffed in part by academic experts. This board will help provide expert advice on methods and on eventual City interventions. For many important reasons, including the need to be able to assure survey subjects that their data will be kept confidential and their privacy will be respected, the Consultant will work with the City to proceed in a manner to develop and clearly disclose strategies being used to protect personally identifiable information.

The purpose of this Methodology—with its data collection, community meetings, surveys, and interviews—is to identify problems relating to digital equity in Cambridge and to inform the development of recommended City interventions and other potential solutions. However, it is important to note that the Methodology should not presuppose what the data will show or what the recommendations should be. Rather, the goal is to gather the most robust data possible.

But once the data are in hand, the Consultant, working closely with the City Team and City Manager-appointed advisory board, should use these data to develop and propose solutions and include these solutions in the final digital equity study. We anticipate that as problems are identified, potential strategies for City intervention will also emerge, especially given the valuable and regular input of experts on the City Manager's advisory board.

### **Project Timeline**

The following is a proposed timeline for a 12-month study process to be conducted by the City's Consultant. This process is designed to proceed logically and methodically, provide the City with incremental deliverables, and allow for the development of recommendations along the way.

**Month 1:** Hold kickoff meeting with the City Manager's advisory board, develop list of needed City data sources, and deliver final mail-based survey language to the City.

**Month 2:** Send out mail-based survey to sample of all City residents to gather baseline data.

**Month 3:** Conduct research on FCC pricing and service data (and consumer pricing and service data) and deliver a report to the City. This report should include an analysis of the use of subsidized internet access programs by City residents, highlighting possible gaps in adoption.

**Months 4 and 5:** Together with the City team, convene 14 community meetings and deliver summary reports (and a synthesis report) from these meetings to the City. Interview experts and deliver summary report from these interviews to the City.

**Month 6:** Drawing on insights from all research conducted to this point, develop face-to-face survey script (to include final language on broadband data-collecting methods), review with advisory board, and deliver the final script for approval by the City.

**Months 7 and 8:** Conduct face-to-face survey with target population and deliver the resulting data—including data from broadband bills—to the City.

**Month 9:** Convene meeting with the advisory board to review all datasets and guide the process of writing a final digital equity study, with the goal of including recommended City interventions and other proposed solutions.

**Month 10:** Develop and deliver draft of digital equity study, highlighting problem areas and recommended solutions.

**Month 11:** Revise report as directed by the City Manager, produce final report, and attend public meetings or other events as requested.

**Month 12:** Convene two additional meetings with the City team, advisory board and other community stakeholders to assist the City in communicating the study findings and implementing recommended interventions.

### **Process and Team**

The City will enter into a contract with one prime vendor, which may be a person, corporation, a partnership, or a joint venture (“Consultant Team”). The Project will be managed by the Director of Communications and 311. The proposal must demonstrate that the Consultant Team members have the specific experience outlined in this request. A Consultant Team Leader for the Project must be designated in the proposal. The City reserves the right to reject proposed Consultant Team member(s), without rejecting the RFP.

### **Deliverables**

An overall Methodology work plan and timeline for partnering with the City Team and the City Manager-appointed advisory board.

The final deliverable should be a digital equity analysis report that summarizes the findings and recommends strategic approaches and roadmaps of concrete actions for the City’s consideration. The report shall include all the data analysis and insights developed in the earlier tasks as well as a series of recommendations—short, medium, and long-term—addressing the challenges and gaps identified by the research in those tasks. The deliverable shall be a substantial body of work, designed to serve as a roadmap for efforts that can be undertaken by both public and private sectors to address digital inequities. The report shall also be designed to serve as a baseline for understanding the current state in Cambridge and for measuring improvements in the future.

### Quality Requirements:

A "No" response, a failure to respond, or a failure to meet any of these Quality Requirements will result in the rejection of your bid. Please check "Yes" or "No" for each of the following requirements.

1. The Consultant is independent of and does not have business ties with wireless carriers, internet service providers, equipment vendors, or construction contractors.

\_\_\_\_\_ YES \_\_\_\_\_ NO

2. The Consultant is experienced in infrastructure engineering, market assessment, business planning (supply side and demand side), strategic planning, statistically valid mail surveys, and expert analysis of survey results.

\_\_\_\_\_ YES \_\_\_\_\_ NO

3. The Consultant has experience working in the Boston metro area and shall have a project manager who is based in the Boston metro area.

\_\_\_\_\_ YES \_\_\_\_\_ NO

4. The Consultant has experience working with towns or cities that are home to major universities, and with the unique broadband characteristics and needs of these localities.

\_\_\_\_\_ YES \_\_\_\_\_ NO

5. The Consultant has experience working with community advisory boards that advise cities and that have representatives from local universities and nonprofits.

\_\_\_\_\_ YES \_\_\_\_\_ NO

6. The Consultant's proposed Project Team members have in the aggregate at least ten (10) years of experience performing the services defined within the scope of this RFP.

\_\_\_\_\_ YES \_\_\_\_\_ NO



## **SECTION VI: COMPARATIVE EVALUATION CRITERIA**

Each responsive and responsible proposal will be assigned a rating for each evaluative criterion along with a composite rating using the categories of “highly advantageous,” “advantageous,” or “not advantageous.”

### **Comparative Criteria**

#### **1. Plan of Services**

Proposers must submit a detailed staffing plan identifying the individuals assigned to this specific project, including but not limited to, the consultant’s proposed Team Leader, and all other project team members who will perform duties under this contract.

**HA** – To receive a Highly Advantageous rating the detailed staffing plan must demonstrate that the proposed project team members have in the aggregate at least 15 years of experience performing the services defined within the scope of this RFP **and** have worked together on at least one other project of like kind.

**A** – To receive an Advantageous rating the detailed staffing plan must demonstrate that the proposed project team members have in the aggregate at least 15 years of experience performing the services defined within the scope of this RFP.

**NA** – To receive a Not Advantageous rating the detailed plan must demonstrate that the proposed project team members have in the aggregate at least 10 but less than 15 years of experience performing the services defined within the scope of this RFP.



## Price Proposal

This price summary form must be submitted in a sealed envelope, separate from the technical proposal. Failure to adhere to this instruction will result in automatic disqualification of your proposal. Price must remain firm for the entire contract unless the hourly rate is reduced.

This is a not to exceed fixed price bid. The total bid price must be complete and include all costs associated with providing the Consultant Services in accordance with the Scope of Work, Specifications and Deliverables including all other details referenced in this Request for Proposal.

Total Flat Fee \$ \_\_\_\_\_

Total Flat Fee in words: \_\_\_\_\_

Please include a supplement sheet(s) with an itemized breakdown of the fee including:

The number of hours the bidder will require to complete services: \_\_\_\_\_

Hourly Rate \$: \_\_\_\_\_

Cost of Materials & Expenses \$: \_\_\_\_\_

## **SECTION VII: REQUIRED SUBMISSIONS**

1. Price Proposal Form - The Price Proposal form must be submitted in a separate sealed envelope marked Price Proposal, separate from the non-price, technical proposal.

**All other submissions below MUST be included with the non-price proposal.**

2. Quality Requirements Form
3. Anti-Collusion and Tax Compliance Form
4. CORI Compliance Form
5. Wage Theft Prevention Certification

**LAWS:**

**GENERAL TERMS AND CONDITIONS**

All deliveries shall conform in every respect with all applicable laws of the Federal government, Commonwealth of Massachusetts and City of Cambridge.

**EQUAL OPPORTUNITY**

The vendor in the performance of the contract shall not discriminate on the grounds of race, color, religious creed, national origin or ancestry, age, disability, sexual orientation, marital status, military status, source of income, or sex in employment practices or in the selection or retention of subcontractors, and in the procurement of materials or rental of equipment. The City may cancel, terminate or suspend the contract in whole or in part for any violation of this paragraph.

**TAXES:**

Purchases made by the City are exempt from the payment of Federal excise tax and the payment of Commonwealth of Massachusetts sales tax (except for gasoline) and any such taxes must not be included in the bid prices.

**QUANTITIES:**

Unless otherwise stated, the quantities set forth herein are ESTIMATES ONLY. The City reserves the right to purchase the commodity(ies) specified in any amount less than the estimated amount.

**BID PRICES:**

Bid prices shall include transportation and delivery charges fully prepaid to the City of Cambridge destination. Where the unit price and the total price are at variance, the unit price will prevail.

**DELIVERY AND**

**PACKAGING:**

Deliveries must be made in such quantities as called for in the purchase order and in the manufacturer's original packages. All deliveries must be **"inside" delivery with no assistance from City personnel. Tailgate deliveries will not be accepted.** Rejected material will be returned to the vendor at the vendor's expense.

**MODIFICATION OF BIDS:**

Prior to bid opening, a bidder may correct, modify or withdraw its bid by making the request in writing prior to the time and date for the bid opening. All corrections and modifications must be delivered to the Purchasing Department in a sealed envelope indicating that it contains a modification or correction of the original bid submitted for the particular commodity and indicating the time and date of the bid opening.

**REJECTION OF**

**BIDS:**

The City reserves the right to reject any and all bids if it is in best interest of the City to do so.

**AWARD OF CONTRACT:**

Contract(s) will be awarded within forty-five days of the bid opening unless award date is extended by consent of all parties concerned.

**INDEMNITY:**

Unless otherwise provided by law, the Vendor will indemnify and hold harmless the City against any and all liability, loss, damages, costs or expenses for personal injury or damage to real or tangible personal property which the City may sustain, incur or be required to pay, arising out of or in connection with the performance of the Contract by reason of any negligent action/inaction or willful misconduct by the Contractor, its agents, servants or employees

**TERMINATION OF CONTRACT:**

Except as otherwise provided in the Articles of Agreement, the City may terminate the contract upon seven days' notice.

**ASSIGNABILITY:**

The Vendor shall not assign, sell, subcontract or otherwise transfer any interest in this contract without the prior written consent of the City.

**MATERIAL SAFETY DATA SHEETS:** Pursuant to M.G.L. c. 111F, ss. 8, 9, and 10, any vendor who receives a contract resulting from this invitation agrees to submit a Material Safety Data Sheet for each toxic or hazardous substance or mixture containing such substance when deliveries are made. The vendor agrees to comply with all requirements set forth in the pertinent laws above.

**Americans with Disabilities Act (42 U.S.C. 12131)  
Section 504 of the Rehabilitation Act of 1973  
Tax Compliance/Anti-Collusion Statement  
Debarment Statement**

The Americans with Disabilities Act (the "Act") applies to all employers of fifteen or more employees. All vendors that are subject to the Act must comply with its provisions. In further compliance with the Act, all Contractors who enter into contracts with the City are prohibited from discrimination against the City's employees, regardless of the size of the Contractor.

The Act protects against discrimination on the basis of "disability", which is defined as a physical or mental impairment that substantially limits at least one "major life activity"; discrimination against a person having a history or record of such impairment; and discrimination against an individual regarded - even if inaccurately - as having such an impairment. The Act also expressly prohibits discrimination that is based on an individual's relationship or association with a disabled person.

The Contractor shall not discriminate against any qualified employee or job applicant with a disability and will make the activities, programs and services covered by any contract awarded through this procurement readily accessible to and usable by individuals with disabilities. To be qualified for a job, or to avail oneself of the Contractor's services, the individual with the disability must meet the essential eligibility requirements for receipt of the Contractor's services or participation in the Contractor's programs or activities with or without: 1) reasonable modifications to the Contractor's rules, policies and practices; 2) removal of architectural, communication, or transportation barriers; or, 3) provisions of auxiliary aids and services.

By submitting its contract, the Contractor certifies to the City of Cambridge that it understands and will comply with all applicable provisions of the Act, including compliance with applicable provisions of Section 504 of the Rehabilitation Act of 1973, if the Contractor is receiving federal funds.

The undersigned certifies under penalties of perjury that this contract has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals

As required by M.G.L. c. 62C, §49A, the undersigned certifies under the penalties of perjury that the Contractor has complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

The undersigned certifies that it is not currently subject to any State or Federal debarment order.

Date: \_\_\_\_\_

\_\_\_\_\_  
(Print Name of person signing bid)

\_\_\_\_\_  
(Signature & Title)

**This form must be submitted with your bid**



## **WAGE THEFT PREVENTION CERTIFICATION**

In Executive Order 2016-1, the City of Cambridge established requirements for City contracts in an effort to prevent wage theft. Prospective vendors must provide the following certifications or disclosures with their bids/proposals. Failure to provide the following shall result in rejection of the bid/proposal.

### **Instructions for this form:**

A prospective vendor must check box 1 or box 2, as applicable, as well as boxes 3-5, and must sign this Form, certifying compliance with the requirements set out in this Form. This Form must be included with the bid or proposal, and for multi-year contracts must be completed annually on the contract anniversary and filed with the Purchasing Agent.

The undersigned certifies under the pains and penalties of perjury that the vendor is in compliance with the provisions of Executive Order 2016-1 as currently in effect.

### **All vendors must certify that [check either box 1 or box 2, as applicable]:**

1. ☐ Neither this firm nor any prospective subcontractor has been subject to a federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal submission.

**OR**

2. ☐ This firm, or a prospective subcontractor of this firm, has been subject to a federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal submission and such documentation is included in the bid/proposal submission.

### **In addition, all vendors must certify each of the following:**

3. ☐ Any federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* imposed on this firm or on any prospective subcontractor while any bid/proposal to the City is pending and, if awarded a contract, during the term of the contract, will be reported to the Purchasing Agent or other City department within five (5) days of receiving notice.

4. ☐ Vendors awarded a contract that have disclosed a federal or state criminal or civil judgment, administrative citation, final administrative determination, or order resulting from a violation of G.L. c. 149, G.L. c. 151, or 29 U.S.C. 201 *et seq.* within three (3) years prior to the date of this bid/proposal, while the bid/proposal was pending, or during the term of the contract shall, upon request, furnish their monthly certified payrolls for their City contract to the Purchasing Agent for all employees working on such contract and are required to obtain a wage bond or other suitable insurance in an amount equal to the aggregate of one year's gross wages for all employees. Vendors subject to a state or federal debarment for violation of the above laws or prohibited from contracting with the Commonwealth are prohibited from contracting with the City, and upon a finding or order of debarment or prohibition, the City may terminate the contract.

5. ☐ Notice provided by the City, informing employees of the protections of Executive Order 2016-1 and applicable local, state, and federal law will be posted by this firm in conspicuous places.

Attested hereto under the pains and penalties of perjury:

\_\_\_\_\_  
(Typed or printed name of person signing  
quotation bid or proposal)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
(Name of Business)

Pursuant to Executive Order 2016-1, vendors who have been awarded a contract with the City of Cambridge must post the Massachusetts Wage and Hour Laws notice informing employees of the protections of G.L. c. 149, G.L. c. 151, and 21 U.S.C. 201 *et seq.* in conspicuous places. This notice can be found at <http://www.mass.gov/ago/docs/workplace/wage/wagehourposter.pdf>

## CORI COMPLIANCE FORM

Persons and businesses supplying goods and/or services to the City of Cambridge ("Vendors"), who are required by law to perform CORI checks, are further required by Section 2.112.060 of the Cambridge Municipal Code to employ fair policies, practices and standards relating to the screening and identification of persons with criminal backgrounds through the CORI system. Such Vendors, when entering into contracts with the City of Cambridge, must affirm that their policies, practices and standards regarding CORI information are consistent with the policies, practices and standards employed by the City of Cambridge as set forth in the City of Cambridge CORI Policy ("CORI Policy") attached hereto.

### CERTIFICATION

The undersigned certifies under penalties of perjury that the Vendor employs CORI related policies, practices and standards that are consistent with the provisions of the attached CORI Policy. **All Vendors must check one of the three lines below.**

1. \_\_\_\_\_ CORI checks are not performed on any Applicants.
2. \_\_\_\_\_ CORI checks are performed on some or all Applicants. The Vendor, by affixing a signature below, affirms under penalties of perjury that its CORI policies, practices and standards are consistent with the policies, practices and standards set forth in the attached CORI Policy.
3. \_\_\_\_\_ CORI checks are performed on some or all Applicants. The Vendor's CORI policies, practices and standards are not consistent with the attached CORI Policy. Please explain on a separate sheet of paper.

\_\_\_\_\_  
(Typed or printed name of person  
signing quotation, bid or proposal)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
(Name of Business)

#### **NOTE:**

The City Manager, in his sole discretion may grant a waiver to any Vendor on a contract by contract basis.

#### **Instructions for Completing CORI Compliance Form:**

A Vendor should not check Line 1 unless it performs NO CORI checks on ANY applicant. A Vendor who checks Line 2 certifies that the Vendor's CORI policy conforms to the policies, practices and standards set forth in the City's CORI Policy. A Vendor with a CORI policy that does NOT conform to the City's CORI Policy must check Line 3 and explain the reasons for its nonconformance in writing. Vendors who check Line 3 will not be permitted to enter into contracts with the City, absent a waiver by the City Manager.

This form must be submitted with your bid.

## City of Cambridge CORI Policy

1. Where Criminal Offender Record Information (CORI) checks are part of a general background check for employment or volunteer work, the following practices and procedures will generally be followed.
2. CORI checks will only be conducted as authorized by Criminal History Systems Board (CHSB). All applicants will be notified that a CORI check will be conducted. If requested, the applicant will be provided with a copy of the CORI policy.
3. An informed review of a criminal record requires adequate training. Accordingly, all personnel authorized to review CORI in the decision-making process will be thoroughly familiar with the educational materials made available by the CHSB.
4. Prior to initiating a CORI check, the City will review the qualifications of the applicant to determine if the applicant is otherwise qualified for the relevant position. The City will not conduct a CORI check on an applicant that is not otherwise qualified for the relevant position.
5. Unless otherwise provided by law, a criminal record will not automatically disqualify an applicant. Rather, determination of suitability based on CORI checks will be made consistent with this policy and any applicable law or regulations.
6. If a criminal record is received from CHSB, the authorized individual will closely compare the record provided by CHSB with the information on the CORI request form and any other identifying information provided by the applicant, to ensure the record relates to the applicant.
7. If, in receiving a CORI report, the City receives information it is not authorized to receive (e.g. cases with dispositions such as not guilty or dismissal, in circumstances where the City is only authorized to receive convictions or case-pending information), the City will inform the applicant and provide the applicant with a copy of the report and a copy of CHSB's *Information Concerning the Process in Correcting a Criminal Record* so that the applicant may pursue correction with the CHSB.
8. If the City of Cambridge is planning to make an adverse decision based on the results of the CORI check, the applicant will be notified immediately. The applicant shall be provided with a copy of the criminal record and the City's CORI policy, advised of the part(s) of the record that make the individual unsuitable for the position and given an opportunity to dispute the accuracy and relevance of the CORI record.
9. Applicants challenging the accuracy of the criminal record shall be provided a copy of CHSB's *Information Concerning the Process in Correcting a Criminal Record*. If the CORI record provided does not exactly match the identification information provided by the applicant, the City of Cambridge will make a determination based on a comparison of the CORI record and documents provided by the applicant. The City of Cambridge may contact CHSB and request a detailed search consistent with CHSB policy.
10. If the City of Cambridge reasonably believes the record belongs to the applicant and is accurate, then the determination of suitability for the position will be made. Unless otherwise provided by law, factors considered in determining suitability may include, but not be limited to the following:
  - (a) Relevance of the crime to the position sought;
  - (b) The nature of the work to be performed;
  - (c) Time since the conviction;
  - (d) Age of the candidate at the time of offense;
  - (e) Seriousness and specific circumstances of the offense;



- (f) The number of offenses;
  - (g) Whether the applicant has pending charges;
  - (h) Any relevant evidence of rehabilitation or lack thereof;
  - (i) Any other relevant information, including information submitted by the candidate or requested by the City.
11. The Personnel Department will assist affected departments in assessing the suitability of candidates in accordance with paragraph 10 a through i above, to ensure consistency, fairness, and protection of employment opportunities and the public interest.
  12. The City of Cambridge will notify the applicant of the decision and the basis of the decision in a timely manner.
  13. CORI information shall not be disseminated or shared with any unauthorized employees or other, but shall be maintained in confidence consistent with the obligations of law.

Revised May 5, 2007

## Chapter 2.121

### LIVING WAGE ORDINANCE

#### Sections:

2.121.010	Title and Purpose
2.121.020	Definitions
2.121.030	Living Wage
2.121.040	Waivers and Exceptions
2.121.050	Notification Requirements
2.121.060	Duties of covered Employers
2.121.070	Community Advisory Board
2.121.080	Enforcement
2.121.090	Severability
2.121.100	Effective Date

#### **2.121.010 Title and Purpose.**

This Chapter shall be known as the "Cambridge Living Wage Ordinance". The purpose of this ordinance is to assure that employees of the City of Cambridge and employees of City contractors, subcontractors and beneficiaries of tax abatements, loans, grants, subsidies and other assistance provided by the City earn an hourly wage that is needed to support a family of four.

#### **2.121.020 Definitions.**

For the purposes of this ordinance, the term:

**(a) "Applicable Department"** means the Personnel Department for employees of the City of Cambridge, the Purchasing Department, with the advice and assistance of the appropriate department which receives the services, for Covered Employers who contract or subcontract with the City of Cambridge, the School Department for employees, contractors and subcontractors of the School Department, and the City Manager's Office for any other Person who is a Beneficiary of assistance other than a contract or subcontract.

**(b) "Assistance"** means:

(1) any grant, loan, tax incentive, bond financing, subsidy, or other form of assistance valued at least \$10,000 that an employer receives by or through the authority or approval of the City of Cambridge, including, but not limited to, c. 121A tax abatements, industrial development bonds, Community Development Block Grant (CDBG) loans and grants, Enterprise Zone designations awarded after the effective date of this Chapter, and the lease of city owned land or buildings below market value; and

(2) any service contract, as defined herein, of at least \$10,000 with the City of Cambridge that is made with an employer to provide services pursuant to G.L.c. 30B or other public procurement laws, awarded, renegotiated or renewed after the effective date of this Chapter.

(3) any service subcontract, as defined herein, of at least \$10,000.

**(c) "Beneficiary"** means:

(1) any person who is a recipient of Assistance;

(2) any company or person that is a tenant or sub-tenant, leaseholder or sub-leaseholder of a recipient of Assistance, provided that said company or person employs at least 25 persons and occupies property or uses equipment or property that is improved or developed as a result of Assistance, after the effective date of this Chapter; and

(d) **"Covered Employer"** means the City of Cambridge or a Beneficiary of Assistance.

(e) **"Covered Employee"** means:

(1) a person employed by the City of Cambridge except for persons in those positions listed in Section 2.121.040(j) of this ordinance; and

(2) a person employed by a Covered Employer, or a person employed by an independent contractor doing business with a Covered Employer, who would directly expend any of his or her time on the activities funded by the contract or the activities for which the Beneficiary received the Assistance, except for persons in those positions listed in Section 2.121.040(j) of this ordinance.

(f) **"Living Wage"** has the meaning stated in Section 2.121.030.

(g) **"Person"** means one or more of the following or their agents, employees, servants, representatives, and legal representatives: individuals, corporations, partnerships, joint ventures, associations, labor organizations, educational institutions, mutual companies, joint-stock companies, trusts, unincorporated organizations, trustees, trustees in bankruptcy, receivers, fiduciaries, and all other entities recognized at law by the Commonwealth of Massachusetts.

(h) **"Service Contract"** means a contract let to a contractor by the City of Cambridge for the furnishing of services, to or for the City, except contracts where services are incidental to the delivery of products, equipment or commodities. A contract for the purchase or lease of goods, products, equipment, supplies or other property is not a "service contract" for the purposes of this definition.

(i) **"Service Subcontract"** means a subcontract primarily for the furnishing of services, to or for a recipient of Assistance, except where services are incidental to the delivery of products, equipment or commodities. A contract for the purchase or lease of goods, products, equipment, supplies or other property is not a "service subcontract" for the purposes of this definition.

#### **2.121.030 Living Wage.**

(a) **Applicability.** Covered Employers shall pay no less than the Living Wage to their employees.

(b) **Amount of wage.** The Living Wage shall be calculated on an hourly basis and shall be no less than \$10.00, subject to adjustment as provided herein. The Living Wage shall be upwardly adjusted each year no later than March first in proportion to the increase at the immediately preceding December 31 over the year earlier level of the Annual Average Consumer Price Index for All Urban Consumers (CPI -U) Boston-Lawrence-Salem, MA - NH, as published by the Bureau of Labor Statistics, United States Department of Labor applied to \$10.00.

(c) **No reduction in collective bargaining wage rates.** Nothing in this Chapter shall be read to require or authorize any beneficiary to reduce wages set by a collective bargaining agreement.

(d) **Cuts in non-wage benefits prohibited.** No Beneficiary will fund wage increases required by this Chapter, or otherwise respond to the provisions of this Chapter, by reducing the health, insurance, pension, vacation, or other non-wage benefits of any of its employees.

#### **2.121.040      Waivers and Exceptions.**

(a) **Waivers.** A Covered Employer may request that the City Manager grant a partial or whole waiver to the requirements of this Chapter.

(b) **General Waivers.** Waivers may be granted where application of this Chapter to a particular form of Assistance is found by the City Solicitor to violate a specific state or federal statutory, regulatory or constitutional provision or provisions, and the City Manager approves the waiver on that basis.

**(c) Hardship Waivers for certain not-for-profit employers.** An employer, who has a contract with the City of Cambridge which is not subject to the provisions of G.L. c. 30B, may apply to the City Manager for a specific waiver where payment of the Living Wage by a not-for-profit Covered Employer would cause a substantial hardship to the Covered Employer.

**(d) Chapter 30B contract waivers.** Prior to issuing an invitation for bids for a procurement contract subject to the provisions of G.L. c. 30B, any Applicable Department may apply to the City Manager for a waiver of the application of the Living Wage to the contract where payment of the Living Wage by a Covered Employer would make it inordinately expensive for the City to contract for the services or would result in a significant loss of services, because the contracted work cannot be segregated from the other work of the Covered Employer.

**(e) General Waiver Request Contents.** All General Waiver requests shall include the following:

- (1) The nature of the Assistance to which this Chapter applies;
- (2) The specific or official name of the Assistance and Assistance program, the statutory or regulatory authority for the granting of the Assistance, and a copy of that authority;
- (3) The conflicting statutory, regulatory, or constitutional provision or provisions that makes compliance with this Chapter unlawful, and a copy of each such provision; and
- (4) A factual explication and legal analysis of how compliance with this Chapter would violate the cited provision or provisions, and the legal consequences that would attach if the violation were to occur.

**(f) Hardship Waiver Request Contents.** All Hardship Waiver requests shall include the following:

- (1) The nature of the Assistance to which this Chapter applies;
- (2) A detailed explanation of why payment of the Living Wage would cause a substantial hardship to the Covered Employer; and
- (3) A statement of proposed wages below the Living Wage.

**(g) Chapter 30B Contract Waiver Request Contents.** A Chapter 30B contract waiver request shall include the following:

- (1) The nature of the Assistance to which this Chapter applies;
- (2) A detailed explanation of why the contracted work cannot be segregated from the other work of the bidding Covered Employers thereby making the cost of the contract with the payment of the Living Wage inordinately expensive or would result in a significant loss of services;

**(h) Community Advisory Board review and recommendation regarding waiver requests.** The Community Advisory Board, as described in Section 2.121.070 of this ordinance, shall consider waiver requests along with their supporting documentation and analysis, and may hold a public hearing to consider the views of the public before making a recommendation to the City Manager regarding the waiver request. For a hardship waiver, the Community Advisory Board shall offer an opportunity to be heard to employees of the Covered Employer. After reviewing the recommendation of the Community Advisory Board, the City Manager may approve and grant or deny all or part of a request. The City Manager may in his or her discretion grant a temporary hardship waiver pending the hearing before the Community Advisory Board. For Chapter 30B contract waivers, the Community Advisory Board shall make its recommendation to the City Manager no more than thirty days after it is notified of the request for a Chapter 30B contract waiver.

**(i) Terms of exceptions.** If an employer is subject to this Chapter as a result of its receipt of more than one kind of Assistance covered by this Chapter, and if the City Manager grants a waiver with respect to one form of Assistance, the City Manager need not find that this Chapter is inapplicable to the employer with respect to another form of Assistance received by the employer.

**(j) Exceptions.** The following positions will be excepted from the requirement of the payment of the Living Wage upon certification in an affidavit in a form approved by the Applicable Department and signed by a principal officer of the Covered Employer that the positions are as follows:



(1) youth hired pursuant to a city, state, or federally funded program which employs youth as defined by city, state, or federal guidelines, during the summer, or as part of a school to work program, or in other related seasonal or part-time program;

(2) work-study or cooperative educational programs;

(3) trainees who are given a stipend or wage as part of a job training program that provides the trainees with additional services, which may include, but are not limited to, room and board, case management, or job readiness services.

(4) persons working in a recognized supported employment program that provides workers with additional services, which may include, but are not limited to, room and board, case management, counseling, or job coaching;

(5) positions where housing is provided by the employer;

(6) employees who are exempt from federal or state minimum wage requirements; and

(7) individuals employed by the City of Cambridge where the employment of such individuals is intended primarily to provide a benefit or subsidy to such individuals, although the City is compensating them for work performed.

#### **2.121.050      Notification Requirements.**

All Applicable Departments shall provide in writing an explanation of the requirements of this ordinance in all requests for bids for service contracts and to all persons applying for Assistance as defined by this ordinance. All persons who have signed a service contract with the City of Cambridge or a contract for Assistance shall forward a copy of such requirements to any person submitting a bid for a subcontract on the Assistance contract.

#### **2.121.060      Duties of Covered Employers.**

**(a) Notification Requirements.** Covered employers shall provide each Covered employee with a fact sheet about this ordinance and shall post a notice about the ordinance in a conspicuous location visible to all employees. The fact sheet and poster shall be provided to the Covered Employer by the Applicable Department and shall include:

(1) notice of the Living Wage amount;

(2) a summary of the provisions of this ordinance;

(3) a description of the enforcement provisions of the ordinance;

(4) the name, address, and phone number of a person designated by the Applicable Department to whom complaints of noncompliance with this ordinance should be directed.

**(b) Contract for Assistance.** At the time of signing a contract for assistance with the City of Cambridge or with a Beneficiary, the contract must include the following:

(1) the name of the program or project under which the contract or subcontract is being awarded;

(2) a local contact name, address, and phone number for the Beneficiary;

(3) a written commitment by the Beneficiary to pay all Covered Employees not less than the Living Wage as subject to adjustment under this ordinance and to comply with the provisions of this ordinance;

(4) a list of Covered Employees under the contract with the employees' job titles;

(5) a list of all subcontracts either awarded or that will be awarded to Beneficiaries with funds from the Assistance. Upon signing any subcontracts, the Covered Employer shall forward a copy of the subcontract to the Applicable Department.

**(c) Maintenance of payroll records.** Each Covered Employer shall maintain payrolls for all Covered Employees and basic records relating thereto and shall preserve them for a period of three years. The records shall contain the name and address of each employee, the job title and classification, the number of hours worked each day, the gross wages, deductions made, actual wages paid, and copies of social security wage and withholding reports, and evidence of payment thereof and such other data as may be required by the Applicable Department from time to time.

**(d) Applicable Department duties.** The Applicable Department shall cause investigations to be made as may be necessary to determine whether there has been compliance with this Ordinance. The Applicable Department shall report the findings of all such investigations to the Community Advisory Board.

**(e) Covered Employer to cooperate.** The Covered Employer shall submit payroll records on request to the Applicable Department. The Covered Employer shall permit City representatives to observe work being performed upon the work site, to interview employees and to examine the books and records relating to the payrolls being investigated to determine payment of wages.

**(f) City Assistance Reports.** Each Applicable Department shall file a City Assistance Report with the City Manager and the Community Advisory Board by July 31 of each year. The report shall include, for each Assistance package or contract approved during the preceding fiscal year:

- (1) the name of the Applicable Department (awarding agency), the name of the specific program under which the Assistance was awarded, and the origin of funds for Assistance;
- (2) a description of the purpose or project for which the Assistance was awarded;
- (3) the name, address, and phone number of a local contact person for the Covered Employer;
- (4) the total cost to the City of Assistance provided to each Beneficiary, including both face-value of Assistance, as well as revenue not collected as a result of the Assistance.

#### **2.121.070      Community Advisory Board.**

**(a) Purpose.** The purpose of the Community Advisory Board shall be to review the effectiveness of this Ordinance at creating and retaining Living Wage jobs, to make recommendations to the City Manager regarding the granting of Waivers to Covered Employers, to review the implementation and enforcement of this ordinance, and to make recommendations from time to time in connection therewith.

**(b) Composition.** The Community Advisory Board shall be composed of nine members and shall include representatives of labor unions, community organizations and the business community. All members will be appointed by the City Manager. Members of the Board shall serve a three-year term. Whenever a vacancy shall occur the City Manager shall appoint a replacement within thirty days of said vacancy.

**(c) Meetings.** The Community Advisory Board shall meet quarterly and in special session as required. All meetings of the Board shall be open to the public and will allow for public testimony on the uses of the City Assistance generally, and on specific instances of Assistance or proposed Assistance as received or sought by individual enterprises.

**(d) Conflict of Interest.** No member of the Community Advisory Board shall participate in any proceeding concerning a Beneficiary, a Covered Employer or a Covered Employee, or applicant for waiver or exemption, if the member or any member of his or her immediate family has a direct or indirect financial interest in the outcome of said proceeding.

#### **2.121.080      Enforcement.**

**(a) Enforcement powers.** In order to enforce this Chapter, the Applicable Department may, with the approval and assistance of the City Solicitor, issue subpoenas, compel the attendance and testimony of witnesses and production of books, papers, records, and documents relating to payroll records necessary for hearing, investigations, and proceedings. In case of failure to comply with a subpoena, the City may apply to a court of appropriate jurisdiction for an order requiring the attendance and testimony of witnesses and the productions of books, papers, records, and documents. Said court, in the case of a refusal to comply with any such subpoena, after notice to the person subpoenaed, and upon finding that the attendance or testimony of such witnesses or the production of such books, papers, records, and documents, as the case may be, is relevant or necessary for such hearings, investigation, or proceedings, may issue an order requiring the attendance or testimony of such witnesses or the production of such documents and any violation of the court's order may be punishable by the court as contempt thereof.

**(b) Complaint procedures.** An employee who believes that he or she is a Covered Employee or an applicant for a position to be filled by a Covered Employee who believes that his or her employer is not complying with requirements of this Chapter applicable to the employer may file a complaint with the Applicable Department or with the Community Advisory Board. Complaints of alleged violations may also be filed by concerned citizens or by the City Council. Complaints of alleged violations may be made at any time, but in no event more than three years after the last date of alleged violation and shall be investigated promptly by the Applicable Department. Statements written or oral, made by an employee, shall be treated as confidential and shall not be disclosed to the Covered Employer without the consent of the employee.

**(c) Investigations and hearings.** The Applicable Department shall investigate the complaint, and may, in conjunction with the City Solicitor, and in accordance with the powers herein granted, require the production by the employer of such evidence as required to determine compliance. Prior to ordering any penalty the applicable Department shall give notice to the employer and conduct a hearing. If at any time during these proceedings, the employer voluntarily makes restitution of the wages not paid to the employee making the complaint and to any similarly situated employees, by paying all back wages owed plus interest at the average prior year Massachusetts passbook savings bank rate, or otherwise remedies the violation alleged if the violation involves matters other than wages, then the Applicable Department shall thereafter dismiss the complaint against the employer.

**(d) Remedies.** In the event that the Applicable Department, after notice and hearing, determines that any Covered Employer has failed to pay the Living Wage rate or has otherwise violated the provisions of this Chapter, the Applicable Department may order any or all of the following penalties and relief:

(1) Fines up to the amount of \$300 for each Covered Employee for each day that the Covered Employer is in violation of this Ordinance, except if the violation was not knowing and willful, then the total fine shall not exceed the amount of back wages plus interest owed;

(2) Suspension of ongoing contract and subcontract payments;

(3) Ineligibility for future City Assistance for up to three years beginning when all penalties and restitution have been paid in full. In addition, all Covered Employers having any principal officers who were principal officers of a barred beneficiary shall be ineligible under this section; and

(4) Any other action deemed appropriate and within the discretion and authority of the city.

Remedies in this section shall also apply to the party or parties aiding and abetting in any violation of this chapter.

**(e) Private right of action.** Any Covered Employee, or any person who was formerly employed by a Beneficiary, may bring an action to enforce the provisions of this Chapter to recover back pay and benefits, attorneys fees and costs, by filing suit against a Beneficiary in any court of competent jurisdiction.

**(f) Remedies herein non-exclusive.** No remedy set forth in this Chapter is intended to be exclusive or a prerequisite for asserting a claim for relief to enforce the right granted under this Chapter in a court of law. This Chapter shall not be construed to limit an employee's right to bring a common law cause of action for wrongful termination.

**(g) Retaliation and discrimination barred.** A Covered Employer shall not discharge, reduce the compensation or otherwise retaliate against any employee for making a complaint to the City, otherwise asserting his or her rights under this Chapter, participating in any of its proceedings or using any civil remedies to enforce his or her rights under the Chapter. The City shall investigate allegations of retaliation or discrimination and shall, if found to be true, after notice and a hearing, order appropriate relief as set out in paragraphs (c) and (d) herein

#### **2.121.090 Severability.**

In the event any provision of this ordinance shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provisions hereof.

#### **2.121.100 Effective Date.**

This law shall be effective sixty (60) after final passage. The Living Wage Ordinance (2.121) provides, at 1.121.030(b) that the wage shall be upwardly adjusted each year no later than March 1<sup>st</sup> in proportion to the increase in the Annual Average Consumer Price Index for the prior calendar year for All Urban Consumers (CPI-U) in the Boston area, as published by the federal Bureau of Labor Statistics.

For calendar year 1999, the CPI-U increased by 2.5%. Therefore, the new living wage, as of March 1, 2000 is \$10.25.

For calendar year 2000, the CPI-U increased by 4.3%. Therefore, the new living wage, as of March 1, 2001 is \$ 10.68.

For calendar year 2001, the CPI-U increased by 4.3%. Therefore, the new living wage, as of March 1, 2002 is \$11.11.

For calendar year 2002, the CPI-U increased by 2.6%. Therefore, the new living wage, as of March 1, 2003 is \$11.37.

The City Council has voted to amend the section of the Living Wage Ordinance (1.121.030 (b) that provides the method for calculating cost of living increases each year. As a result of this change, the living wage as of March 30, 2003 is \$11.44.

For calendar year 2003, the CPI-U increased by 3.76%. Therefore, the new living wage, as of March 1, 2004 is \$11.87.

For calendar year 2004, the CPI-U increased by 2.7%. Therefore, the new living wage, as of March 1, 2005 is \$12.19.

For calendar year 2005, the CPI-U increased by 3.3%. Therefore, the new living wage, as of March 1, 2006 is \$12.59.

For calendar year 2006 the CPI-U increased by 3.1 %. Therefore, the new living wage, as of March 1, 2007 is \$12.98.

For calendar year 2007 the CPI-U increased by 1.9 %. Therefore, the new living wage, as of March 1, 2008 is \$13.23.

For calendar year 2008 the CPI-U increased by 3.5 %. Therefore, the new living wage, as of March 1, 2009 is \$13.69.

For calendar year 2009 the CPI-U decreased by .67 %. Therefore, the new living wage, as of March 1, 2010 will remain at \$13.69.

For calendar year 2010 the CPI-U increased by 1.57%. Therefore, the new living wage, as of March 1, 2011 is \$13.90.

For calendar year 2011 the CPI-U increased by 2.71%. Therefore, the new living wage, as of March 1, 2012 is \$14.28.

For calendar year 2012 the CPI-U increased by 1.58%. Therefore, the new living wage, as of March 1, 2013 is \$14.51.

For calendar year 2013 the CPI-U increased by 1.37%. Therefore, the new living wage, as of March 1, 2014 is \$14.71.

For calendar year 2014 the CPI-U increased by 1.61% Therefore the new living wage, as of March 1, 2015 is \$14.95.



For calendar year 2015 the CPI-U increased by .06%, Therefore the living wage, as of March 1, 2016 is \$15.04.

For calendar year 2016 the CPI-U increased by 1.47% Therefore the new living wage, as of March 1, 2017 is \$15.26.

For calendar year 2017 the CPI-U increased by 2.51% Therefore the new living wage, as of March 1, 2018 is \$15.64.

For calendar year 2018 the CPI-U increased by 3.29% Therefore the new living wage, as of March 1, 2019 is \$16.15.

**City of Cambridge  
Articles of Agreement  
SAMPLE SAMPLE SAMPLE SAMPLE**

**Commodity:**  
**File Number:**

This agreement is made and entered into this \_\_\_\_\_, by and between the **City of Cambridge** ("the CITY"), a municipal corporation organized and existing under the laws of the Commonwealth of Massachusetts, and \_\_\_\_\_, existing under the laws of the State of \_\_\_\_\_ ("the Contractor").

**Address:**  
**Telephone, Fax, E-mail:**

**Article I. Definition.** "This Contract" as used herein shall mean these Articles of Agreement and "the bid documents," which include, but are not limited to, the instructions to bidders, the Contractor's bid or proposal, the specifications, the general conditions, the requirements, the applicable addenda, and all documents and forms submitted with the Contractor's bid or proposal that were accepted by the City.

**Article II. Duration.** The Contractor shall commence the performance of this contract for the period beginning on \_\_\_\_\_ and ending on \_\_\_\_\_.

**Article III. Terms.** The Contractor agrees to provide the services all in accordance with the bid documents of (bid opening date) or (proposal if appropriate).

**Contract Value:**

**Article IV. Payment.** The City agrees to pay to Contractor the sum set forth in the Contractor's bid or proposal. **Contractor shall invoice department to which it provided the service, not the Purchasing Department.**

**Article V. Termination.** The following shall constitute events of default under this Contract requiring immediate termination: a) any material misrepresentation made by the Contractor, b) any failure by the Contractor to perform any of its obligations under this Contract including, but not limited to, the following: (i) failure to commence performance of this Contract at the time specified in this Contract due to a reason or circumstance within the Contractor's reasonable control, (ii) failure to perform this Contract with sufficient personnel and equipment or with sufficient material to ensure the completion of this Contract within the specified time due to a reason or circumstance within the Contractor's reasonable control, (iii) failure to perform this Contract in a manner reasonably satisfactory to the City, (iv) failure to promptly re-perform within reasonable time the services that were rejected by the City as erroneous or unsatisfactory, (v) discontinuance of the services for reasons not beyond the Contractor's reasonable control, (vi) failure to comply with a material term of this Contract, including, but not limited to, the provision of insurance and nondiscrimination, and (vii) any other acts specifically and expressly stated in this Contract as constituting a basis for termination of this Contract.

Except as otherwise provided in the Articles of Agreement, the City may terminate the contract upon seven days' notice.

**Article VI. Damages.** From any sums due to the Contractor for services, the City may keep for its own the whole or any part of the amount for expenses, losses and damages as directed by the Purchasing Agent, incurred by the City as a consequence of procuring services as a result of any failure, omission or mistake of the Contractor in providing services as provided in this Contract.

**Article VII. Conflict.** In the event there is a conflict between these Articles and the bid documents, the bid documents shall supersede these articles.

**Article VIII. Governing laws and ordinances.** This Contract is made subject to all the laws of the Commonwealth and the Ordinances of the City and if any such clause thereof does not conform to such laws or ordinances, such clause shall be void (the remainder of the Contract shall not be affected) and the laws or ordinances shall be operative in lieu thereof.

**Article IX. Performance Security.** Upon execution of this Contract by the Contractor, the Contractor shall furnish to the City security for the faithful performance of this Contract in the amount of     0%     of the value of the bid in the form of a performance bond issued by a surety satisfactory to the city or in the form of a certified check.

**Article X. Equal Opportunity.** the Contractor in the performance of all work under this contract will not discriminate on the grounds of race, color, sex, age, religious creed, disability, national origin or ancestry, sexual orientation, marital status, family status, military status, or source of income in the employment practices or in the selection or retention of subcontractors, and in the procurement of materials and rental of equipment. The city may cancel, terminate or suspend the contract in whole or in part for any violation of this article.

**Article XI. Assignability.** the Contractor shall not assign, sell, subcontract or transfer any interest in this contract without prior written consent of the city.

In witness whereof, the parties have hereto and to three other identical instruments set their hands the day and year first above written.

Approved as to Form:

The Contractor:

\_\_\_\_\_  
Nancy E. Glowa  
City Solicitor

\_\_\_\_\_  
Signature and Title

\_\_\_\_\_  
City Manager

\_\_\_\_\_  
Elizabeth Unger  
Purchasing Agent